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ABSTRACT

A national seminar was held in September 1968 designed to identify agricultural education programs needed in area vocational centers and to develop techniques and procedures for planning and conducting agricultural education programs for secondary students in area vocational centers. Appendixes include papers presented by consultants and recommendations of task forces on the following topics: rationale and need for agricultural occupations programs in area centers; coordination of agricultural occupations programs in area centers and participating schools; curriculum development; guidance, placement, and follow-up of students; facilities and equipment; selection and preparation of staff; occupational experience programs; program evaluation; and adult and continuing education. Findings and recommendations of the seminar are presented as guidelines for the development and implementation of agricultural occupations programs in area vocational centers categorized by the following topics: appraising needs and resources; planning a state program; coordinating programs in area centers and participating schools; evaluating programs; developing curriculums and teaching; selecting, recruiting, and preparing staff; and adult and continuing education. (JRM)

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FINAL REPORT

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AGRICULTURAL OCCUPATIONS PROGRAM DEVELOPMENT IN AREA VOCATIONAL SCHOOLS

Ralph E. Bender, Project Director
Department of Agricultural Education
The Ohio State University
Columbus, Ohio 43210

September 1969

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Ralph E. Bender, Project Director
J. Robert Warmbrod, Compiler and Editor

Department of Agricultural Education
College of Agriculture and Home Economics
The Ohio State University
Columbus, Ohio 43210

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PREFACE

Guidelines, suggestions, and supporting materials concerning the development of agricultural occupations programs in area schools are included in this report. They are based upon the study and deliberations of more than 100 professional personnel from throughout the United States who participated in a National Seminar sponsored by the Department of Agricultural Education at The Ohio State University under a grant from the U.S. Office of Education.

If vocational education in agriculture is to develop the number and kind of new and expanded programs to meet the training needs for agricultural personnel, we must make use of some arrangement such as area centers or schools. Local schools in many situations do not have a sufficient number of students or the facilities and other resources necessary to provide an adequate program of vocational education. It is hoped that these guidelines can be used to develop the kind and number of programs needed.

Special recognition should be given to personnel in Ohio who planned and carried out many of the details of the seminar. They include James E. Dougan who served as co-director and Ralph Woodin as program chairman, assisted by Welch Barnett and James Hensel. The responsibility for arrangements and facilities were assumed by Gilbert Guiler and Richard Hummel. Seminar evaluation was planned and conducted by Darrell Parks and J. Robert Warmbrod. Warmbrod compiled and edited the final report. Graduate students who assisted were Richard Edsall, Don Herring, Wiley Lewis, and Billy Vice.

Ralph E. Bender
Project Director

NATIONAL SEMINAR
AGRICULTURAL OCCUPATIONS PROGRAM DEVELOPMENT IN AREA VOCATIONAL SCHOOLS*

SUMMARY

The National Seminar on Agricultural Occupations Program Development in Area Vocational Schools was conducted by the Department of Agricultural Education, The Ohio State University, pursuant to Grant No. OEG-0-8-070773-3531(085), Bureau of Research, U.S. Office of Education. Eighty-five participants from 36 states, nine consultants, and the seminar staff participated in the seminar held at Bowling Green State University, Bowling Green, Ohio, on September 15-20, 1968.

The major purposes of the national seminar were to identify programs in agricultural occupations which should be an integral part of instructional programs in area vocational centers, to develop techniques and procedures for planning and conducting agricultural occupations programs in area vocational centers, and to develop further the competence of leaders in agricultural education for giving direction to the development and operation of agricultural occupations programs in area vocational centers.

Participants were selected from state vocational education administrators' nominations of persons whose responsibilities include administration, supervision, planning, conducting, and evaluating instructional programs in area vocational centers. The seminar program was designed to provide in-depth study and discussion on the following topics: rationale and need for agricultural occupations programs in area centers; coordination of agricultural occupations programs in area centers and participating schools; curriculum development; guidance, placement, and follow-up of students; facilities and equipment; selection and preparation of staff; occupational experience programs; evaluation of area center programs; and adult and continuing education in agricultural education. Participants were assigned to nine task forces to formulate recommendations for the development and operation of agricultural occupations programs in area vocational centers. The seminar program emphasized program development in area centers for high school students.

Twenty-six persons including consultants, seminar participants, and the seminar staff participated in a two-day follow-up conference held March 17-18, 1969 at The Ohio State University. The purpose of the follow-up conference was to formulate guidelines for the development, conduct, and evaluation of agricultural occupations programs in area vocational centers.

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*The terms "area vocational school" and "area vocational center" are used synonymously in this report.

Guidelines, which constitute the findings and recommendations of the national seminar, were developed for the following aspects of agricultural occupations program development in area vocational centers: appraising the needs and resources for the establishment of area centers; developing procedures for planning a state program of agricultural education; coordinating agricultural education programs in area centers and participating schools; evaluating agricultural occupations programs; developing curriculums and teaching; selecting, recruiting, and preparing teachers; and developing adult and continuing education programs.

Participants' reactions, assessed periodically during the seminar and at the close of the seminar, indicated a high degree of satisfaction with the organization, content, and activities of the seminar. A follow-up of participants three months after the seminar indicated that participants had informed other leaders in agricultural education, vocational education, and general education of the findings and recommendations of the seminar, that they were actively engaged in the development and implementation of agricultural occupations programs in area vocational centers, and that they were engaged in activities which further enhance their ability to assume leadership in the development and implementation of agricultural occupations programs in area vocational centers.

INTRODUCTION

The Problem

The goals of modern education continue to reach beyond those believed attainable several decades ago. Some schools, particularly in rural areas, are too small to meet the demands of youth and adults for education. The small elementary school is largely a thing of the past, and the small high school is soon to follow. Today a diversified high school curriculum is demanded which means additional course offerings, laboratories, workshops, instructional materials, guidance services, specialized teachers, and supervisors. The expansion and improvement of high school curriculum necessitates new and improved programs of vocational education. This means pooling of funds and students for high schools with enrollments of 1,000 to 2,000 students.

The needs of students for diversified vocational education offerings from which to choose and the limitations of schools and communities as to occupational absorption are often serious handicaps to extensive programs of vocational education in many high schools. Frequently youth cannot develop their potential abilities, and adults are unable to obtain retraining in technical knowledge necessary for the many jobs resulting from advances in science and technology. Centralization of vocational facilities is one solution since bringing together facilities, students, teachers and funds sufficient in quantity can overcome many inefficiencies and secure needed diversification in course offerings.

This centralization is now in progress in many states outside the large cities in the form of area vocational centers as a means of using resources effectively in preparing individuals for occupations in agriculture. More time and effort needs to be given to the development of agricultural occupations programs in area vocational centers.

Recent technological changes have changed employment opportunities in agriculture considerably. Studies show that for every person employed on a farm, two persons are needed with knowledge, skills, and abilities in agriculture in the non-farm sector of business and industry. This suggests a great need to prepare individuals for skilled occupations in non-farm occupations.

Area vocational centers can alleviate part of the problem since bringing together facilities, students, teachers, and funds in sufficient quantity can supplement local programs and thereby secure some of the essential diversification needed in vocational agriculture programs.

Many states have allocated a large percentage of the 1963 Vocational Education Act fund for construction of buildings and providing equipment for area vocational centers. Taxpayers in many school districts have voted matching funds for construction and levies for the operation of area vocational centers. Leaders in agricultural education throughout the nation saw a need to define the role of vocational agriculture in area vocational centers and to give leadership in developing agricultural occupations programs in area centers. The central focus of this national seminar was to bring together leaders in agricultural education and others charged with the responsibility for administering programs in area centers for the purposes of determining the role that agricultural education can and should have in this type of school and for developing recommendations and guidelines for implementing agricultural occupations programs in area vocational centers.

Purposes and Objectives

The general purposes of the national seminar were (i) to identify the educational programs in vocational agriculture which should be an integral part of the offerings in area vocational centers, (ii) to develop innovative techniques and procedures for planning and conducting agricultural occupations programs in area vocational centers, and (iii) to upgrade the competence of leaders in agricultural education for giving direction to the development and operation of agricultural occupations programs in area centers. Specific objectives of the seminar were:

1. To create an awareness on the part of participants concerning their role and function in assisting and determining the basic needs for agricultural occupations programs in area vocational centers.

2. To determine the appropriate relationship that should exist between agricultural occupations courses and non-technical courses at both the high school and post-high school levels.

3. To identify programs that will meet the agricultural employment needs in the area and state which can be conducted advantageously in area centers and supplemental to rather than a replacement of agricultural courses offered in local high schools.

4. To determine effective techniques and procedures for coordinating existing programs of vocational agriculture in high schools with agricultural occupations programs in area vocational centers.

5. To develop effective procedures for using advisory committees in planning and conducting agricultural occupations programs in area vocational centers.

6. To determine facilities and equipment needed to conduct agricultural occupations programs in area vocational centers.

7. To determine the personnel needed and their qualifications for directing and teaching agricultural occupations programs in area vocational centers.

8. To develop information and materials that can be effectively used by guidance counselors in directing students into agricultural occupations programs provided in area vocational centers.

For a more complete statement concerning the specific objectives of the seminar and a statement of the behavioral objectives of the seminar, the reader is referred to Ralph J. Woodin's presentation "Some Objectives of This Seminar" (Appendix A).

METHODS AND PROCEDURES

Participants

The National Seminar on Agricultural Occupations Program Development in Area Vocational Schools was designed for a target audience of leaders in vocational and technical education whose specific responsibilities include administration, supervision, planning, conducting, and evaluating educational programs in agricultural education at the secondary and post-secondary levels in area vocational centers. A letter (Appendix E) was sent to State Directors of Vocational Education, State Supervisors of Agricultural Education, and the Head Teacher Educator in Agricultural Education in each state requesting nominations of persons who should be invited to attend the seminar. After nominations were received, participants were selected by the seminar staff using the following criteria. Participants must:

1. Have been nominated by the appropriate state vocational education administrator
2. Have been either a member of the state staff of vocational education in agriculture or of a local agricultural education program
3. Have a Bachelor's or higher degree and a minimum of three years experience in teaching vocational agriculture
4. Have an interest in and direct responsibility for giving leadership to the development of agricultural occupations programs in area centers
5. Be in a position to maximize the application and implementation of the recommendations of the national seminar.

Letters of invitation (Appendix E) were issued to those persons nominated who met the above requirements.

Eighty-five participants from thirty-six states attended the seminar. Also in attendance were nine consultants and the seminar staff. A list of participants and consultants may be found in Appendix D. The number of participants by type of position is as follows.

Position	Number of Participants
Supervisory staff of state departments of education	33
Administrators, supervisors, and teachers of secondary and post-secondary area vocational centers	25
Teacher education staff in colleges and universities	17
Other (USOE personnel, teachers and supervisors in local school systems, and representatives of organizations and agencies)	10

Six months following the national seminar, fifteen of the consultants and participants were invited to a follow-up conference to review the recommendations resulting from the seminar and prepare final recommendations and guidelines for agricultural occupations program development in area vocational centers. A list of persons attending the follow-up conference is included in Appendix D.

Seminar Program

The National Seminar in Agricultural Occupations Program Development in Area Vocational Schools was held September 15-20, 1968 at Bowling Green State University, Bowling Green, Ohio. The central focus of the five-day seminar program was the development and implementation of agricultural occupations programs at the high school level in area vocational centers. The program developed by the seminar staff was designed to provide in-depth study and discussion on the following topics.

1. Rationale and need for agricultural occupations programs in area centers
2. Coordination of agricultural occupations programs in area centers with other agricultural education programs
3. Development of agricultural occupations curriculums and courses
4. Guidance, placement, and follow-up of students in area vocational centers

5. Facilities and equipment for agricultural occupations programs in area centers

6. Selection and preparation of personnel for area vocational centers

7. Occupational experience for agricultural occupations programs in area centers

8. Evaluation of agricultural occupations programs in area vocational centers

9. Post-high school young and adult farmer programs in area vocational centers

A consultant (Appendix D) prepared and presented a major paper on each of these topics. Presentations were followed by symposia, panels, and questioning sessions whereby participants discussed and explored further the topics under consideration. Each participant was assigned to one of nine task forces. Each task force studied one of the major topics in detail and developed recommendations pertaining to that topic for the development and operation of agricultural occupations programs in area vocational centers. One day of the five-day seminar was spent touring and studying facilities of three area vocational centers in Ohio.

The seminar program is included in Appendix C. Appendix A includes the consultants' presentations and a summary statement and the recommendations of task forces for each of the nine major topics considered during the seminar.

A follow-up conference of a national seminar was held March 17-18, 1969 at The Ohio State University, Columbus, Ohio. The major purpose of this conference was to formulate guidelines for the development, conduct, and evaluation of agricultural occupations programs in area vocational centers. The guidelines developed during the follow-up conference constitute the findings and recommendations of the national seminar. Twenty-six persons including consultants, seminar participants, and members of the seminar staff (Appendix D) participated in the two-day follow-up conference. Consultants prepared background papers (Appendix B) for the follow-up conference on the following topics.

1. Needs and resources for area vocational centers

2. Development of state programs for agricultural occupations in area centers

3. Coordination and articulation between programs in area centers and participating schools

4. Evaluation of agricultural occupations programs in area centers

5. Curriculum and teaching in area vocational centers

6. Preparation, recruitment and selection of teachers

7. Adult and continuing education in area vocational centers

Each person participating in the follow-up conference was assigned to a committee charged with writing guidelines for one of the above topics. Using the consultants' background papers and the papers and task force recommendations from the national seminar, each committee developed guidelines for the development and implementation of agricultural occupations programs in area vocational centers. The program for the follow-up conference is included in Appendix C. The guidelines developed by the committee, which were reviewed and revised by the participants in the follow-up conference, constitute the major findings and recommendations resulting from the National Seminar on Agricultural Occupations Program Development in Area Vocational Schools.

Evaluation

Concurrent evaluation of the seminar involved participants' reactions to the purpose, content, and activities of the seminar program and a listing by participants at the close of the seminar of the ideas resulting from the seminar which they plan to implement in their respective states.

Three months following the seminar, all participants were asked to indicate (i) the groups with whom they had shared information and ideas resulting from the seminar, (ii) their activities pertaining to agricultural occupations program development in area vocational centers since attending the seminar, (iii) additional assistance and material needed for the further development and implementation of agricultural occupations programs in area schools, and (iv) the extent to which the seminar influenced their ideas concerning agricultural occupations programs in area vocational centers. Three months following the seminar, a participant from each state was asked to describe the status of agricultural occupations program development in area vocational schools and centers in that state.

A copy of instruments used in collecting data for evaluating the seminar is included in Appendix F. In a subsequent section of this report, data are presented pertaining to the evaluation of the seminar.

RECOMMENDATIONS

The major purpose of the national seminar was to develop recommendations and guidelines for developing, implementing, and evaluating agricultural occupations programs in area vocational centers. The guidelines presented below, which were finalized during the follow-up conference to the national seminar, constitute the major findings and recommendations resulting from the seminar.

Appraising the Needs and Resources for the Establishment of Area Vocational Centers

1. In identifying manpower needs for use in planning instructional programs in area vocational centers, the following should be considered.

    a. Annual employment opportunities in each area of instruction should be established. Data are needed concerning the present number employed, annual withdrawal rates, rates of growth for employment, and potential for employment in new industrial development.

    b. The interests of high school students and adults in the various occupational areas need to be surveyed.

    c. Business and industry should be surveyed to establish their occupational training needs.

    d. The number of students presently being trained by all educational institutions in the service area should be considered.

    e. Vocational and technical education programs should be planned which are based on the projected needs in a specific occupational area considering the factors listed above.

    f. Advisory personnel should review and recommend occupational areas of instruction to be included in the vocational and technical education offerings of area center programs.

2. In appraising resources for the establishment of instructional programs in area vocational centers, the following should be considered.

    a. Capital and operational costs of instructional programs in specific occupational areas should be considered with respect to availability of financial resources.

    b. The availability of adequately trained and professionally qualified personnel should be considered in selecting staff for an occupational instructional program.

    c. The resources of business and industry should be considered in selecting an occupational instructional program.

    d. Administrative resources should be considered in selecting an occupational training program.

    e. Public relations and communication resources, political and governmental resources, philosophical resources (what communities see as major purposes of public education), and advisory resources should be considered in selecting the occupational education programs to be offered in area vocational centers.

Developing Procedures for Planning a State Program of Agricultural Education in Area Vocational Centers

1. Statewide planning for programs in area vocational centers should be considered by representatives from each of the vocational services. A member of the state supervisory staff in agricultural education should be a part of the team to establish statewide policy for the development of instructional programs in area vocational centers.

2. State policies and procedures should be developed for the establishment of area vocational centers.

    a. Approval of the State Board for Vocational Education should be obtained for the establishment of area vocational centers. Local leaders should conduct studies to determine the feasibility of establishing area centers using the consulting services of state vocational personnel. Formal applications for the approval of area centers should be made to the State Board for Vocational Education.

    b. A program determination survey should be made to identify the occupational areas for which instructional programs should be provided. A team of vocational consultants should make this survey and develop recommendations for program offerings based on data supplied by local school personnel and statewide surveys. Programs should be recommended which can be justified on the basis of manpower needs and student interests.

    c. Educational specifications should be developed for each program identified in the program determination study. Educational specifications should describe and outline the requirements for instructional programs. Architects and other consultants should develop plans for facilities based on the educational specifications for the instructional programs to be offered.

    d. Local boards of education should request that the State Board for Vocational Education commit federal and state funds for the construction of facilities for area vocational centers.

3. A master plan for establishing agricultural education programs in area vocational centers should be developed. The plan should:
    - a. Indicate (i) the number and location of major program areas which should be established and (ii) the number of graduates in each major program area needed by the agricultural industry.
    - b. Establish procedures for (i) determining program offerings and facilities, (ii) providing information regarding employment opportunities, (iii) providing guides for curriculum development, (iv) coordinating area center programs with programs in participating schools, (v) recommending teachers, and (vi) evaluating programs.

4. State advisory committees should be organized to function in each major program area of agricultural education.
    - a. A representative from each of these committees should serve on the statewide advisory committee concerned with policy development for all areas of agricultural education.
    - b. Each of the state advisory committees should serve in an advisory capacity to all levels of instruction in the respective major program area.
    - c. State advisory committees should assist the state supervisory staff in agricultural education in (i) determining statewide employment opportunities, (ii) determining the number of programs which should be established to provide adequate numbers of graduates to meet manpower needs in the agricultural industry, (iii) providing consultant services in the development of program curriculums and facilities, (iv) providing assistance in placement of graduates, and (v) assisting with evaluation of programs to insure properly trained workers for the agricultural industry.

5. A state plan should be developed for certifying teachers of agriculture for area vocational centers.
    - a. Certification standards are needed for specialized teachers of agriculture.
    - b. Teacher education institutions should provide pre-service and in-service educational programs to assist teachers in area centers in meeting certification standards.

6. The supervisory staff in agricultural education should be adequate in number and competence to provide assistance to local and area school districts in developing and coordinating programs in area vocational centers.

7. A statewide plan should be developed to provide for placement and follow-up of graduates of agricultural occupations programs in area vocational centers. Contacts with agricultural industry should be maintained to assist graduates in securing employment. A plan should be developed for follow-up of graduates on the job.

Coordinating Agricultural Education Programs in Area Vocational Centers and Participating Schools

1. The state supervisory staff in agricultural education should aid local administrators and chief administrative officers in area vocational centers in determining the interest and need for agricultural education in the area or region served by the area center. Suggested activities include:
   - a. Guide and coordinate studies to determine employment needs in agricultural occupations in participating school districts and in the area served by the area vocational center.
   - b. Assist in evaluating data gathered and prepare reports and recommendations for use by local administrative and guidance personnel.
   - c. Assist local schools in identifying interests of students in agricultural occupations.
   - d. Aid administrators in area centers and participating schools to arrive at decisions concerning the need for introducing programs in agricultural education.
2. The state supervisory staff in agricultural education should provide leadership in developing guides for use by chief administrative officers in area vocational centers and by local school administrators dealing with curriculum offerings, facilities for agricultural education programs, and lists of recommended equipment and resource materials. Specific activities include:
   - a. Assist in the selection and appointment of teachers, specialists, and community resources in the development of curriculums.
   - b. Develop guidelines for use by area centers and participating schools in the construction of agricultural facilities and the securing of equipment.
   - c. Assist local and area administrators in curriculum and construction needs.

3. State supervisory staff in agricultural education should aid in the coordination of agricultural education programs offered at area vocational centers with programs offered in participating schools. In accomplishing this task, the supervisory staff should:

    a. Encourage and guide directors of area vocational centers to hold meetings with teachers of agriculture, advisory committees, guidance personnel, and school administrators to discuss the role of the area center and the supportive services that can be provided participating schools.

    b. Assist in the development of specialized services at the area center which cannot be offered economically by participating schools; for example, guidance and placement services, programs for out-of-school youth and adults, and programs for the disadvantaged and handicapped.

    c. Visit participating schools and area centers to review program offerings and identify needs for further program development.

    d. Plan and conduct meetings for the specific purpose of enhancing the coordination of agricultural education programs in area vocational centers and in participating schools.

4. The state staff in agricultural education should cooperate with staff members in other vocational services in identifying assistance to be provided by each occupational area. Specific activities include:

    a. Hold meetings of state supervisory staff members from the several vocational services to aid in understanding and developing multi-occupations programs.

    b. Identify occupations for which training incorporates competencies and knowledge from several occupational areas.

    c. Cooperate in developing curriculum guides for multi-occupational programs.

5. The state supervisory staff in agricultural education should provide guidance and assistance in encouraging the development of innovative programs to serve more effectively persons who can benefit from instruction in agriculture. Policies should be developed which provide financial incentives to encourage the development of innovative programs.

6. The state supervisory staff in agricultural education should guide the development of professional associations that serve all teachers of agriculture. A structure and an incentive

should be provided for making all teachers in an area--both teachers in participating schools as well as teachers in the area center--a part of the professional association for teachers.

7. The state supervisory staff in agricultural education should provide leadership in guiding the State FFA Association into a revised structure which will provide equal opportunity for membership and recognition to all students enrolled in agriculture. Specific activities recommended include:

    a. Guide the development of revisions in the State FFA constitution and ritual to provide for students' training for occupations other than farming at area occupational centers as well as participating schools.

    b. Encourage the development of an FFA program to serve area occupational centers offering instruction in agriculture.

    c. Guide the coordination of the FFA program at the area centers with FFA programs in participating schools.

    d. Provide leadership to teachers and supervisors in area centers in implementing and carrying out FFA programs that are an integral part of the instructional program in agriculture in area centers.

    e. Encourage area centers and participating schools to provide time during the school day for conducting FFA meetings and other appropriate FFA activities.

    f. Guide the development of a state awards program that will provide recognition to students making outstanding achievement in all occupational programs in agriculture.

Evaluating Agricultural Occupations Programs in Area Vocational Centers

1. The guidelines developed by the committee are based on these assumptions: (i) the instructional program in agriculture being evaluated is part of an area center's program, (ii) the area center program enrolls students from participating high schools, (iii) the area center program makes up a part of a total state program, (iv) state educational systems combine to form the federal system of education, (v) evaluation will take place and will focus on the local level, and (vi) employability becomes a goal for every student at some time in his life.

2. The purposes of evaluating area center programs in agricultural occupations should include (i) to evaluate programs of agricultural occupations and assist in program development, (ii) to develop long-term programs in agricultural occupations through

identifying long-time goals and objectives, (iii) to involve lay people and administrators in review and projection of instructional programs, and (iv) to better inform lay people, administrators, and others regarding the program of agricultural occupations.

3. The state supervisory and teacher education staff should:

   a. Give priority to local evaluation as a means of improving area school programs of agricultural occupations.

   b. Initiate and encourage evaluations of area center programs.

   c. Devise and make available sample evaluation instruments, survey forms, and other devices needed for conducting local evaluations.

   d. Develop a general plan for conducting local evaluations in agricultural occupations programs in area centers.

   e. Insure that the plan of evaluating agricultural occupations programs in area centers is coordinated with and related to similar evaluations made of the entire area center and with evaluations made by participating schools.

   f. Insure that evaluation of area center programs in agricultural occupations cooperatively involve lay committee, local administrators, and the state supervisory and teacher education staffs.

4. The following procedure is recommended for evaluating agricultural occupations programs in area centers.

   a. A member of the state supervisory staff in agricultural education who is in charge of the district where the area center is located should confer with the agriculture teachers and area school administrators on the desirability of evaluation and the objectives and procedures for evaluating the program.

   b. Area school administrators, teachers, and advisory committees may appoint an ad hoc committee to evaluate the area center program in agricultural occupations. The following persons or groups should constitute the membership of the committee: teachers of agriculture, superintendent, principal, guidance director, local businessmen, and parents.

   c. The state supervisory staff member, and administrator of the area center, and teachers of agriculture should set a date for the evaluation and constitute an evaluation steering committee.

d. The steering committee should determine the major sources of information needed for the evaluation and name an evaluation committee of five to eight persons to make the evaluation. Membership on the evaluation committee should include the teachers in the school to be evaluated, the school administrator, a member of the state supervisory staff, teachers of agriculture from participating schools, and lay persons.

e. Evaluation committee should develop and revise appropriate evaluation instruments and conduct the evaluation which will include self-evaluation by the participating teachers.

f. Teachers in the area centers should collect needed information and have it available for use during the evaluation.

g. A written report of the evaluation should be prepared and submitted to the chief administrator of the area vocational center and to other appropriate individuals.

h. A follow-up conference should be held a few weeks later to review the long-term program developed as a result of the evaluation.

5. The following general criteria should be used in evaluating instructional programs in area vocational centers.

   a. Accessibility: Are vocational programs available to students who need them?

   b. Relevancy: Are the programs relevant to the needs of students and appropriate for labor market demands?

   c. Efficiency: Is the investment of resources yielding the maximum benefit to students and to society?

   d. Flexibility: Can programs be changed and adjusted to market demands in a relatively short period of time?

6. A complete evaluation must consider all aspects of the instructional program. The following is proposed as a typical but not comprehensive example.

   a. Supporting services: facilities, equipment, and supplies; teacher preparation and selection; guidance of students; and placement in industry both before and after graduation.

   b. Instruction: teacher action to promote learning; courses of study; student organizations; and supervised experience programs.

   c. Student characteristics: employability; and maximizing student potential.

Developing Curriculums and Teaching in Area Vocational Centers

1. Instructional programs for high school students in area vocational centers should be designed to prepare individuals for job entry (immediate employment) in a cluster of agricultural occupations rather than for a specific occupation.

2. Instructional programs for high school students in area vocational centers should be designed to encourage and prepare students for further education in post-high school technical programs, continuing education while employed, and professional programs in colleges and universities.

3. Agricultural education programs in area centers should be more specialized than programs offered in local participating schools. For example, programs in agricultural mechanics should provide specialized instruction in gasoline engine mechanics, diesel mechanics, and farm machinery repair; in ornamental horticulture specialized instruction should be offered in areas such as turf management, floriculture, and landscaping.

    a. Courses offered at the ninth- and tenth-grade levels should be introductory in nature including orientation to the field of agriculture, basic science, mathematics, mechanics of agriculture, and citizenship development.

    b. Courses offered at the eleventh- and twelfth-grade levels should be modular to provide the utmost flexibility to enable students to meet individual interests and occupational needs.

4. A chief administrative officer of the area vocational center should assume the responsibility of coordinating agricultural occupations programs in the area center with programs in participating schools.

5. The following factors should be considered in selecting subject matter for courses offered in area centers.

    a. Competencies needed for employment (technical and human relations competencies).

    b. Competencies needed for entering and progressing in post-high school educational programs.

    c. Subject matter of courses completed by students in participating schools.

    d. Subject matter of other vocational courses in the area center.

   e. The total educational program which students are pursuing.

6. The following groups and individuals should be involved in curriculum development.

   a. Teachers of agriculture in the area center and participating schools.

   b. Administrators, supervisors, and curriculum specialists in the area center.

   c. State curriculum specialists and curriculum and research specialists of the Research Coordinating Unit.

   d. State supervisory and teacher education staff.

   e. State and local advisory council and industry representatives.

7. State supervisory and teacher education staffs should assume responsibility for the development of curriculum guides appropriate for specialized programs of agricultural education in area centers. Final responsibility for detailed curriculum planning rests with the area center administration and staff.

8. Curriculum development should take into consideration adjustments in subject matter content and the time necessary to meet the needs of students with special needs. Special programs should be developed in area centers for advanced and talented students as well as for disadvantaged and handicapped students.

9. Supervisors and teacher educators should work closely with staffs and faculties of area vocational centers in planning and conducting in-service education appropriate to the unique problems encountered in planning, conducting, and evaluating agricultural education programs in area centers.

10. Effective instruction in specialized programs in area centers must include provisions for appropriate occupational and laboratory experience which is directly related to the course of study. State supervisory and teacher education staffs have a responsibility to work with area center personnel to insure that the teaching staff is both technically and professionally competent to conduct specialized programs in area centers.

11. Adequate facilities, equipment, and instructional materials must be provided for specialized instructional programs in area centers. In many cases school facilities must be provided to insure adequate occupational and laboratory experiences.

12. Supervisory and teacher education staffs should work with the staff in area vocational centers in designing instructional programs which allow maximum flexibility concerning length of course, complexity of instruction, and type of occupational and laboratory experience. Units of instruction in the agricultural occupations programs that are common to instructional programs in other occupational areas may be taught as a course common to all occupational education programs to which it is appropriate.

13. Students enrolled in agricultural occupations programs in area centers should be active members of the FFA. Teachers at area centers must work closely with teachers of agriculture in participating schools in planning and conducting FFA programs and activities. If students attend the area center full time, provisions should be made for appropriate student organizations and activities in the area center.

Selecting, Recruiting, and Preparing Teachers for Area Vocational Centers

1. State staffs of supervisors and teacher educators should consider the following qualifications when recruiting teachers for area vocational centers.

    a. Occupational experience in the area of specialization

    b. Competence in subject matter

    c. Demonstrated success in teaching

    d. Knowledge of the relationships between (i) vocational education and other programs, (ii) vocational agriculture and other vocational programs, and (iii) educational programs in area vocational centers and participating schools.

    e. Demonstrated abilities in (i) human relations, (ii) developing leadership characteristics in people, (iii) counseling, guiding, and placing people in occupations commensurate with their interest patterns and educational qualifications, and (iv) surveying community needs and designing educational programs to meet these needs.

2. There should be an active program of recruitment in each state to secure an adequate supply of teachers for area vocational centers.

    a. Suggested sources of supply for teachers include (i) former successful teachers of vocational agriculture who have left the teaching profession and who have gained management, supervisory, or operational experience in an area of specialization, (ii) graduates of other departments in colleges of agriculture who are certified or who are willing to become certified to teach, (iii) experienced successful teachers of agriculture who have demonstrated teaching competence in an area of specialization, and (iv) persons with occupational experience in an area of specialization who are willing to pursue a professional improvement program leading to full certification to teach.

b. Suggested approaches to recruiting include (i) systematic efforts by state supervisory and teacher education staffs to develop and maintain a list of potential teachers for area vocational centers and to communicate regularly with and inform these persons of employment and training opportunities, (ii) selective incentive programs (sabbatical leaves, graduate assistantships, summer workshops) to encourage potential teachers to prepare for employment in area vocational centers, and (iii) a mass media approach to informing college administrators, department chairmen in colleges of agriculture, state agricultural officials, agricultural businessmen, and the public in general about the development of area vocational center programs.

3. State staffs of supervisors and teacher educators should develop a variety of programs and techniques to prepare persons for teaching in area centers.

   a. Some possibilities for teacher education include (i) dual majors for undergraduates enrolled in other departments in the college of agriculture, (ii) specialization options within agricultural education programs, (iii) internship or externships in an area of specialization, (iv) in-service teacher education courses, workshops, and institutes, (v) alternative approaches to certification requirements, including opportunities for persons to develop teaching qualifications needed for differentiated staffing, and (vi) new course offerings in areas of study such as philosophy of vocational-technical education, vocational guidance, and administration and supervision of vocational education programs.

   b. The provisions for preparing and upgrading teachers of the Education Professions Development Act should be used as sources of financial support for preparing teachers for agricultural occupations programs in area vocational centers.

Developing Adult and Continuing Education Programs in Area Vocational Centers

1. In an agricultural community, people of all ages can profit from courses in agricultural education. The area vocational center can and should help meet this need. A school system offering instruction in agriculture for high school students also has a need for adult and continuing education in agriculture.

2. Teachers of agriculture should assume leadership in determining needs for adult education in agriculture and for establishing priorities. School administrators, boards of education, and advisory committees should help in determining needs for adult and continuing education. Personnel in agricultural industries can assist in determining needs for the non-farm occupations.

3. Each participating school and the area vocational center should have an advisory committee with representation from production agriculture and agricultural business and industry. Each participating school should have representatives on the advisory committee for the area vocational center.

4. The advisory committee of the area vocational center should advise concerning the planning, conduct, and evaluation of adult and continuing education programs in agricultural education in the area vocational district. The vocational agriculture teachers in participating schools should assist in the organization, teaching, and on-farm and on-job instruction of adult and continuing education programs.

5. Supervisors of agriculture in area vocational centers should assist vocational agriculture teachers in participating schools in the promotion, development, operation, and evaluation of adult and continuing education programs. Supervisors in area centers and teachers in participating schools should utilize the services of the teacher education and supervisory staffs and personnel in agricultural business and industry in planning, conducting, and evaluating adult and continuing education programs in agriculture.

6. Adequate staff and time of staff must be provided to offer effective and continuing education programs in agriculture. Multi-teacher departments may be necessary to accomplish this task. Qualified staff members should be hired for specialized instruction. Pre-service and in-service programs are needed to prepare teachers for conducting adult and continuing education programs in agriculture.

7. Adult and continuing education in agriculture offered by area vocational centers and participating schools should be coordinated with adult education programs provided by other agencies. Cooperation and communication are essential among agencies and institutions providing adult and continuing education in agriculture.

8. Programs of adult and continuing education in agriculture should be adequately financed from local, state, or federal sources. Agricultural businesses may be one source of financial assistance. In some cases it may be necessary for enrollees to pay for specialized services (for example, records processing and analysis) which are a part of the instructional program.

9. Enrollees in adult and continuing education programs should be encouraged to become members of young farmers organizations and equivalent groups. Local and state organizations of enrollees help to improve the instructional program. Activities of these organizations should be of an educational nature. A member of the state supervisory staff in agricultural education should assist with the organization and preparation of local and state organizations. Teachers of agriculture in the area center and participating schools should be responsible for organizations of enrollees in the local community.

10. Long-range planning should be used in planning the curriculum for adult and continuing education programs in agriculture. Consultants including the advisory committee members and representatives of business and governmental agencies should be used in curriculum development. Persons enrolled should help determine course objectives and be involved in the conduct of the instructional program. Content of instruction should be organized on a seasonal basis with problems of those enrolled serving as the basis for the instructional program.

11. Evaluation of adult and continuing education programs in agriculture should be based on educational objectives. Educational objectives should be developed by analyzing the local situation and needs, by analyzing available records, and by deciding upon desirable changes in the behavior of enrollees. Teachers, enrollees, and advisory committee members should be involved in evaluating adult and continuing education programs.

EVALUATION OF THE SEMINAR

Evaluation of the seminar took two forms. First was evaluation conducted periodically throughout and at the end of the seminar to assess participants' reactions to the content and conduct of the seminar. Next there was evaluation conducted at the end of the seminar and three months following the seminar to ascertain participants' intentions and accomplishments regarding the development of agricultural occupations programs in area vocational centers. A copy of the instruments used in evaluating the seminar are included in Appendix F.

Participants' Reactions

Three times during the seminar--afternoon of the first day, afternoon of the second day, morning of the fourth day--participants were asked to indicate their reaction to the following descriptors of the content and activities of the seminar.

-- Content clear to me

-- New ideas to me

-- My participation

-- Usefulness to me

-- Opportunity for my participation

-- Level of group interest

-- Take-home value for me

-- My general reaction

Participants marked each item on a ten-point scale, ranging from a value of +5 indicating a high or favorable reaction to -5 indicating a low or unfavorable reaction. The seminar staff reviewed the reactions of seminar participants after each administration of the instrument for the purpose of making adjustments in the organization and conduct of the seminar.

The average ratings of participants for each of the eight descriptors are indicated in Table 1. The trend of participants' reactions was toward more favorable reactions as the seminar progressed. The data reported in Table 1 indicate that all reactions were positive, that participants perceived that the ideas and recommendations of the seminar were useful, that there was ample opportunity for participation during the seminar, and that a relatively high level of interest on the part of participants was maintained throughout the seminar.

At the conclusion of the seminar, participants were asked to indicate their degree of agreement or disagreement with twenty-five items having to do with the seminar objectives, program, and task force sessions and with the interest and participation of seminar participants. The participants' responses to this instrument are indicated in Table 2.

Generally, participants indicated that the objectives of the seminar were clear, realistic, and accomplished during the five-day program. The responses indicated that some participants may not have fully understood the purposes of the seminar prior to attending since 45 per cent of the participants indicated that the purposes of the seminar were not the same as their purposes for attending.

Participants indicated that the seminar program was appropriate, well organized, made effective use of speakers and consultants, utilized adequate facilities, and led to the development of useful ideas concerning agricultural occupations programs in area vocational centers. Participants indicated, however, that they would have desired more time for informal discussion during the seminar. Although their responses were more favorable than unfavorable, participants were not as pleased with the organization and conduct of the task force sessions as they were with other aspects of the seminar program. The participants indicated that the seminar was interesting, worthwhile, provided opportunity for the expression of ideas, and stimulated the development of ideas contributing to the development of agricultural occupations programs in area vocational centers.

Table 1

Participants' Reactions During the Seminar

Item	Average Rating[a] First day (p.m.)	Second day (p.m.)	Fourth day (a.m.)
Content clear to me	3.0	3.1	3.3
New ideas to me	1.6	1.9	2.8
Usefulness to me	2.0	2.1	2.2
Take home value to me	1.9	2.1	2.3
Opportunity for my participation	1.5	1.5	2.0
My participation	0.5	1.3	1.6
Level of general interest	2.8	2.5	2.8
My general reaction	2.1	2.6	2.8

[a] A 10-point scale was used to quantify participants' reactions. The scale values varied from +5 (indicating high or favorable reaction) to -5 (indicating low or unfavorable reaction).

Table 2

Participants' Reactions at End of Seminar

Per Cent Indicating					
Strongly agree	Agree moderately	Undecided	Disagree moderately	Strongly disagree	Item
					Objectives of the Seminar
19	59	7	14	1	The objectives of the seminar were clear to me
31	57	7	3	2	The persons who planned the seminar should feel that the objectives of the seminar were accomplished
0	8	8	54	30	The objectives of the seminar were not realistic
3	26	16	37	18	The objectives of the seminar were not the same as my purposes for attending
					Seminar Program
29	64	3	4	0	The content of the seminar program was very appropriate
61	35	3	0	1	The seminar was well organized
0	0	4	60	36	The seminar program should have included more speakers
3	13	12	59	13	The seminar program was too fixed
4	23	11	46	16	The seminar was too long
12	63	21	4	0	The consultants encouraged the development of new viewpoints and ideas
12	42	10	30	6	There was not enough time for informal discussion during the seminar
1	3	9	62	25	Too much time of the participants was spent in the evaluation of the seminar

Table 2 (Continued)

Per Cent Indicating: Strongly agree	Agree moderately	Undecided	Disagree moderately	Strongly disagree	Item
84	15	0	1	0	The facilities (meeting rooms, etc.) for the seminar were very adequate and contributed to a successful seminar
7	25	7	46	15	I got few new ideas during the seminar which will aid in the development of agricultural occupations programs in area schools
					Task Force Sessions
13	28	10	38	11	The task force sessions should have been more structured
5	29	12	48	6	Not enough time was provided for task force sessions
8	53	9	20	10	All participants contributed effectively to the task force sessions
3	16	12	56	13	The consultants should have contributed more to the task force sessions
19	49	21	8	3	The recommendations of the task force will be very valuable in developing agricultural occupations programs in area schools
					Interest and Participation
50	40	2	8	0	The seminar held my interest
0	3	3	29	65	The seminar was quite boring
45	42	2	11	0	The seminar was very worthwhile
18	68	7	6	1	The consultants were stimulating and interesting
42	52	3	3	0	During the seminar I was stimulated to think about the development of agricultural occupations programs in area schools
0	9	10	61	20	I did not have an opportunity to express my ideas during the seminar

When asked to comment on the major strengths of the seminar, participants most frequently mentioned the opportunity to discuss problems and share ideas, the organization of the seminar, the use of speakers and consultants, and the field trip. Participants' comments regarding the major weaknesses of the seminar emphasized two points. They indicated that not enough time was provided for questions and discussion of speakers, consultants, and panel and symposium members. Also, participants would have desired that more time during the seminar be devoted to agricultural occupations programs in area centers at the post-high school level.

Participants' Plans and Activities

The major focus of the seminar was the further development of participants' abilities to develop and implement agricultural occupations programs in area vocational centers. At the conclusion of the seminar, participants were asked to record what they considered to be the two or three most worthwhile ideas resulting from the seminar that they planned to implement. The participants listed more than forty different ideas which, in their opinion, warranted further consideration and implementation. The ideas most frequently listed were:

1. Use advisory councils more effectively and more extensively in planning and conducting agricultural occupations programs in area vocational centers.

2. Improve programs for recruiting, selecting, and preparing teachers--both pre-service and in-service--for agricultural occupations programs in area centers.

3. Discuss information and recommendations of the seminar with key persons in education and industry.

4. Plan and conduct more effective occupational experience programs as a part of instructional programs in agricultural occupations in area centers.

5. Develop additional specialized agricultural occupations programs for secondary students in area vocational centers.

6. Plan agricultural occupations programs which are based on systematic studies of the educational needs for agricultural occupations programs and the interest of students and prospective students.

7. Plan and conduct systematic evaluations of agricultural occupations programs in area vocational centers.

8. Improve coordination and articulation between agricultural occupations programs in area centers and instructional programs in agricultural education offered in participating schools.

9. Obtain adequate facilities and equipment for educational programs in area centers.

10. Involve guidance counselors to a greater extent in informing and counseling students about agricultural occupations programs in area vocational centers.

11. Visit area center programs both in the state and out of the state.

Thirty additional ideas were listed by the participants. These categories of ideas for implementation had to do with persons in agricultural education assuming leadership in establishing agricultural occupations programs in area schools, expansion of adult and continuing education in area centers, increase in supervision of programs in area centers, improved communication between personnel in agricultural education and school administration, curriculum development emphasizing flexibility of curriculums, expansion of supervised occupational experience as an integral part of the educational program, development of instructional materials, development of agricultural occupations programs at the post-secondary level, statewide planning for area center programs, and financing programs of agricultural occupations in area centers.

During December 1968, three months following the seminar, participants were asked through a mailed instrument to report their activities since attending the seminar relating to the promotion and development of agricultural occupations programs in area vocational centers. All participants responded. The activities of seminar participants during the three-month period following the seminar are recorded in Tables 3 and 4.

The information recorded in Table 3 indicates that participants had informed other leaders in agricultural education, vocational education, and general education of the findings and recommendations of the seminar. It is clear from Table 4 that seminar participants were actively engaged, following the seminar, in activities directly related to the development of agricultural occupations programs in area vocational centers and in activities which further enhanced their knowledge and understanding of area vocational centers and the development of educational programs in area vocational centers.

As a part of the follow-up study, participants were asked also to indicate whether the ideas presented and recommendations resulting from the seminar reinforced, changed, or conflicted with their ideas concerning what should be done in their state in developing agricultural occupations programs in area centers. Fifty-nine per cent of the participants reported that their participation in the seminar had reinforced what was being done in their state to develop agricultural occupations programs in area centers; 31 per cent indicated that their thinking had been changed through participation in the seminar; 11 per cent indicated that the proposals presented during the seminar conflicted with their thinking regarding the development of agricultural occupations programs in area vocational centers.

A part of the follow-up study conducted three months following the seminar involved an assessment of the status of agricultural occupations program development in area vocational centers in the thirty-six states

Table 3

Groups With Whom Participants Shared Seminar Findings and Recommendations

Group	Per Cent of Participants
Supervisory staff in agricultural education	71
Supervisory staff in vocational education	40
Other state department of education staff	29
Teacher education staff in agricultural education	61
Area and local supervisors of vocational education	49
Local school administrators	52
Vocational agriculture teachers	69
Lay citizens	20
Legislators	4

Table 4

Activities of Participants Following the Seminar

Activities	Per Cent of Participants
Activities Pertaining to Program Development	
Formulating statewide plans for program development and implementation in area centers	24
Developing program standards and criteria	37
Defining procedures for recruitment and guidance of students	30
Developing pre-service and in-service teacher education programs	37
Designing procedures for coordinating area and local programs	40
Designing patterns for state and area supervision	13
Developing reimbursement patterns for area programs	11
Staffing positions in area center programs	39
Developing certification standards	14
Developing occupational experience programs for area center programs	29
Developing procedures for placement and follow-up	18
Developing instructional materials	40
Developing promotional literature	28
Planning facilities	54
Activities Enhancing Additional Understanding	
Visited area schools in state	59
Visited area schools out of state	16
Attended or conducted meetings for area center personnel	24
Solicited services of USOE and out of state personnel as consultant	7
Used resource personnel who participated in the seminar	12

represented by seminar participants. One participant from each state was asked to complete an instrument (Appendix F) pertaining to the number, types, and level of area vocational centers in the state, the number of centers in which agricultural occupations programs were in operation during 1968-69, the number of centers in which agricultural occupations programs would be developed in the future, staffing patterns for agricultural occupations programs in area centers, teacher education programs to prepare and upgrade staff in area centers, and standards and specifications for facilities and equipment for agricultural occupations programs in area centers. A summary of the findings of this phase of the follow-up study was presented during the follow-up conference on March 17-18, 1969 held at The Ohio State University. (See Appendix B, "Some Implications of the Bowling Green Seminar" by J. Robert Warmbrod.)

APPENDIX A

NATIONAL SEMINAR: FORMAL PRESENTATIONS AND TASK FORCE REPORTS

WHY WE ARE HERE

Homer E. Edwards
Program Officer, Vocational and Technical Education
Region V, U. S. Office of Education
Chicago, Illinois

May I preface my remarks by bringing greetings from the U. S. Office of Education--both from Region V which proudly includes the State of Ohio and from the Washington Office. Bill Lewis, the Regional Director of Adult, Vocational and Library Programs, requests that I convey his best wishes for a successful conference. Neville Hunsicker has requested that I personally convey to you his regret in not being able to be here. Some of you may remember his remarks in Denver two years ago when he suggested that agricultural educators give complete support to the area center program at all levels as a means of expanding and improving our total program of vocational education for agricultural occupations.

This conference is one of a very few funded this year that is specific to an occupational area. Mr. Hunsicker, Dr. Philip Teske, and several others in the Washington Office, as well as the fine team from Ohio, are to be thanked for working for and obtaining the approval of this conference.

In January 1966 the first meeting of the regional and Washington staff members in agricultural education was held. It was the decision of that group to attempt to meet at regular intervals in order to accomplish a uniform thrust in facing the challenges of program promotion in agricultural education. At the second meeting of this group, one of the major items on our agenda was to list the priorities regarding needed national seminars and workshops in the broad program of vocational education in agriculture. Seven proposals for seminars were listed including this one regarding agricultural education in area centers. In fact, Ohio was listed then as a possible host.

This list of needs or suggested seminars has been amended from time to time. Additions and deletions have been made. Each revision contained a proposal for this national seminar. Finally, in January 1968 we were assured that the seminar would be funded and become a reality. This is one good reason why we are here.

Another reason why we are here is that most of us believe in vocational education for agricultural occupations. We have by tradition and profession maintained a position of leadership--that of staying ahead of the growing edge of progress.

Area vocational centers have been for some time the intent of Congress and a major part of the big picture for vocational education in the United States. Area centers have been designed to provide a means of expanding programs of vocational education and as one of the ways for bringing high quality vocational education to all the people in all communities. Our challenge has been to provide vocational education to those individuals who desire and can profit from it.

We, who are professionals in agricultural education, have the desire and have worked diligently to do our part in making sure that training for agricultural occupations is a part of the big picture. Instruction in agriculture is an essential phase of programs in area vocational centers. We have always met such challenges in an exemplary fashion. We will complete this conference with ideas, plans, and conclusions leading to the improvement of the good work we are already doing. We will also establish guidelines for those who are unable to be with us.

Each of you can list many other reasons why we are here. A partial list might include:

--To exchange ideas

--To take a forward look

--To hear about successful programs from those who administer and conduct them

--To establish a rationale for agricultural programs in presently operating and future area vocational centers

--To learn how to coordinate area programs with on-going programs in local schools

--To determine possible curriculums and courses of study for area centers

--To find out the best ways of equipping and building the types of facilities needed for programs in area centers

--To determine new methods of using guidance and placement personnel to facilitate successful programs

--To decide the kind or type of agricultural instructors and other personnel needed to operate effective programs

--To discuss the big problem of making programs truly vocational through supervised occupational experience programs

--To learn more about evaluation procedures for these programs

--To discover ways and means of coordinating secondary area vocational programs with post-secondary programs

--To think about young and adult farmer programs centered in area schools

--To create another growth atmosphere for the expansion of agricultural education

--To determine the best role for state supervisors, teacher educators, local and state directors, and other vocational personnel in promoting, operating, and evaluating area vocational programs

--To evaluate the progress in your state or area with that of your peers

But most of all we are here to give our best thinking and expertise in developing recommendations that we can live with and sell to those back home who are expecting the best from us. We expect recommendations and an agenda for action that we can proudly claim as good--Friday and ten years from now.

As I see it, this is our challenge. We are here with the blessings of other capable educators at the local, area, state, regional and national levels. We have a purpose, an aim, and a commitment.

Thus to summarize this opening statement:

The time is now
The team is here
The topic is set
The task is ours
Let's have at it!

SOME OBJECTIVES OF THIS SEMINAR

Ralph J. Woodin
Professor of Agricultural Education
The Ohio State University
Columbus, Ohio

The most important objectives of this seminar will be those which you, who make up the seminar, set up for yourselves. I know that you had certain objectives in mind when you decided to come. I am sure that throughout the week there will be changes and adjustments in these objectives.

You may be interested, however, in some of the objectives which our planning committee thought to be important in planning the seminar. I would like to introduce the planning committee who worked with me. They include Welch Barnett, Assistant Supervisor of Vocational Agriculture, and Dr. James Hensel of the Center for Vocational-Technical Education at Ohio State University. I am sorry that Dr. Hensel cannot be with us.

Nearly two years ago, when we made application to the U. S. Office of Education for financial support for this seminar, we were asked to propose a major purpose and objectives.

The major purpose which we submitted was to identify the educational programs in vocational agriculture which should be an integral part of the offerings in area vocational schools; to develop innovative techniques and procedures for planning and conducting these programs, and to upgrade the competence in leaders in vocational agriculture for giving direction to area vocational agriculture programs.

Certain definitions will help you to understand what we had in mind as we defined agricultural occupations, program development, and area vocational schools. For our purpose, we defined agricultural occupations as those occupations requiring background and training in agriculture for successful employment. These include the eight areas of agriculture including production agriculture.

We defined program development as the process of setting up goals, identifying resources, and developing and implementing procedures for a unified system for providing an educational program.

We defined area vocational schools as schools which have as their primary objective the development of occupational proficiency which is a part of the public school system and which include both high school and post-high school programs as well as young and adult farmer programs.

We should point out that our definition does not include technical education even though it might be housed in the same facility. We consider the problems of technical education to be of sufficient difference to justify consideration elsewhere.

When we set up our objectives, we were asked to list them as behavioral objectives. In other words, we were asked to state exactly what the participants in this seminar should be able to do. Here are eight behavioral objectives which we listed:

1. Be ready to assume the leadership responsibility in conducting a study or survey of a given geographic area in his state for the purpose of determining where an area vocational program in agriculture is needed, who should be served by such a program, and the specific programs to be offered.

2. To be able to write out a set of procedures for articulating the non-technical agriculture courses at the high school and post-high school levels in his state.

3. Be able to take the primary leadership in designing and installing in an area vocational school an agriculture program for any geographic area of his own state; a program which will supplement the present agricultural offerings.

4. Be able to write out a set of guidelines that will serve as the basis for identifying, appointing, and giving direction to the activities of an advisory committee serving an area vocational agriculture program.

5. Be able to write up the space and facility requirements for a vocational agriculture program in an area school.

6. Be able to write out a list of equipment needed to establish and operate specific course offerings that might be included in an area school vocational agriculture program.

7. Be able to write out a set of criteria that can be used for determining whether or not a given teacher meets the qualifications necessary to effectively direct and/or teach in a vocational agriculture program in an area vocational school in his state.

8. To be able to plan and establish a systematic and effective program of student personnel services for an area vocational school that will enable the school to meet its objectives for students enrolled in the agriculture program.

This list of eight objectives sounds very ambitious at 9:00 a.m. on Monday at the start of the seminar.

I am reminded of the story of the young man who took a short cut through a cemetery on a dark, rainy night and fell into an open grave. After trying desperately to get out, he found that there was no way out, so he moved over to one corner and leaned back and went to sleep. A couple of hours later another young fellow crossing the cemetery fell into the grave and tried desperately to get out and finally the young man who fell in first said in a hollow voice, "You can't jump out of here." But he did.

I am sure that many of you have been in the position of meeting a nearly impossible situation and find that you had the resources to do what was needed. Some might feel this way in regard to agricultural education in area schools, but ten years hence, I am sure you will be able to say "it was just about impossible to institute successful programs of agricultural education in area schools; but we did."

As we planned the program for this seminar, we felt we needed the leadership of some of the top administrators and teacher educators in the nation and we think we have them in the nine consultants who will be working with you this week. Each of the consultants will make a major presentation; they will also serve as a continuing planning committee as the seminar gets underway. They will also serve as consultants to eight task forces which will be organized. (See Appendix D for a list of consultants.)

We believe that the task forces listed in the program will serve an important purpose in giving you an opportunity to discuss your problems and exchange ideas with others. These task forces will discuss the following problems: Task Force 1, The Need for Agriculture in Area Vocational Schools; Task Force 2, Coordinating the Area Agriculture Program with Other Agricultural Education Programs; Task Force 3, Selecting Agricultural Occupations, Curriculums and Courses; Task Force 4, The Guidance of Area School Students Including Follow-up and Placement; Task Force 5, Facilities and Equipment for Agriculture in Area Schools; Task Force 6, Selection of Area School Personnel for Agriculture Programs with Emphasis Upon the Faculty; Task Force 7, Providing Occupational Experience for Agricultural Occupations in the Area Vocational School; Task Force 8, Evaluation of Agriculture Programs in Area Schools, and Task Force 9, Recommendations for Adult and Young Farmers in the Area School. Time will be provided for meetings of these task forces. Their reports will represent an important contribution to this seminar.

Another feature of the program which relates to the objectives is that of visiting three area schools in this vicinity. We are planning visits to the Van-Guard Vocational School, to EHOVE Vocational School, and to the Penta County Vocational and Technical Center because we believe that you will profit from seeing facilities and discussing on the spot some of the problems which administrators and teachers have encountered as they developed agriculture programs in these area schools.

In looking over the program, you will note that we have involved many of you as participants in the program. Our count shows that we have a total of 78 persons who are involved in this program. Thirty-seven are Ohio persons, all who have had experience with agricultural programs in area schools.

These are some of the features which we hope will carry out some of the objectives. Finally and perhaps the most important objectives in the seminar are some of the informal ones which grow out of any successful workshop. They have to do with knowing the people who are "in the game," learning from the accomplishments and mistakes of others, and most important of all, revising those objectives which you came with as you continue to plan for a new and challenging aspect of agricultural education, that of agricultural education in the area vocational school.

NEED FOR AGRICULTURAL EDUCATION IN AREA VOCATIONAL SCHOOLS

Summary*

The Setting

The opportunity for expanding vocational education to meet the needs of persons in today's world is unlimited. Vocational education has made much progress since the enactment of the Smith-Hughes Act in 1917, but there is much to be done and many adjustments that should be made to keep abreast of the time and serve the needs of the people. Appropriate vocational education must be provided which prepares persons for employment and increases their proficiency for occupations in which they can be successful.

It is the responsibility and challenge of vocational education to provide instructional programs and the accompanying facilities, equipment, and staff necessary to provide occupational education to all persons who need and can profit from such training. It is the responsibility of vocational education to provide instructional programs for all high school students, both those who will enter employment after graduation as well as college-bound students. Vocational education must continually be provided for post-high school students and adults which not only prepares them for employment but upgrades their knowledge and skills. Such a plan of vocational education is needed if the tremendous manpower needs of agriculture, business, and industry are to be met.

Area Center Concept

Limitations of finance, space, equipment, and staff make it difficult for a local high school system to provide the wide variety of programs needed to meet manpower needs in all occupational fields. The high school vocational center offers one solution to this problem. The area vocational center concept takes two forms: One is an area vocational center in which both vocational and general education courses are offered which qualify a student for a high school diploma; the other is a center where students complete general subjects in their home schools and are transported to an area center for vocational instruction.

The area vocational center offers many advantages: vocational education is made available to more students; economy is facilitated in that one facility and staff serves several local schools; a broader curriculum providing a wider choice of courses is possible; expanded and improved guidance programs are possible; a more flexible curriculum is possible; and new and modern facilities improve the image and status of vocational education. Area vocational centers provide a means of expanding and further developing special services. The establishment of area centers does not necessarily eliminate previously established courses in local schools nor does it preclude the establishment of additional vocational courses in local schools. Programs of instruction in area vocational centers complement the curriculum of local schools.

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*A summary of seminar sessions relating to this topic. Presentations pertaining to the topic and task force recommendations follow this summary statement.

Agricultural Education in Area Centers

Instructional programs in agriculture should be offered in area vocational centers. While agricultural production will continue to be important in the course of study, the number of students who need such training will, at best, remain constant. Other instructional areas of agricultural education provide possibilities for growth of instructional programs in area vocational centers. By enrolling students from several local schools in specialized programs in area centers, a sufficient number of students can be assembled to justify expenditures for specialized equipment, facilities, and staff.

Personnel in agricultural education must take the initiative and be a part of the team in planning, constructing, and operating area vocational centers. Agricultural educators are best qualified to organize and conduct research necessary to determine the instructional programs in agriculture to be offered in area vocational centers. The development of programs of vocational agriculture in area centers will expand and improve the opportunities for high school students and adults to study agriculture and prepare for occupations involving knowledges and skills in agriculture.

A RATIONALE FOR AREA VOCATIONAL EDUCATION CENTERS

R. D. Anderson
State Director (Retired) of Vocational Education
South Carolina Department of Education
Columbia, South Carolina

It is a pleasure to be here today and appear on your program. Although my talents, if I have any, do not include "speechmaking," I have never felt that I could or should pass up an opportunity to promote or give encouragement to the development and expansion of vocational education.

It is particularly pleasing to be among educators in agricultural education since that is the "road I traveled" in becoming a state director of vocational education. I feel very much at home, but I hasten to add that after fourteen years as a state director and not being involved in the details of agricultural education, I also feel somewhat inadequate to discuss agriculture in a technical way.

I have always found it best not to spend much time in looking backwards; however, we must occasionally glance backwards to see how far we have come and to determine how far we must go. Certainly we have taken great strides and have made much progress since the passage of the first National Vocational Act--the Smith-Hughes Act--yet there is considerable distance to travel if we are to reach the goals we have set for ourselves and if we are to make the adjustments to continuing changes that are taking place. If we are to keep abreast of the times and serve the people to whom we have dedicated our lives, we must remove any resistance to change that we may have and be prepared to make many adjustments in the days and years ahead.

In addition to change, there is much unrest, dissention, and chaos in our country today and throughout the entire world. It seems that everyone is extremely conscious of his or her "rights." There are many rights to which people are entitled, but before one can exercise these rights someone must first provide them. It is my belief that every man, woman, and child has the right to obtain all the education he or she desires and is capable of acquiring. Yet this is not a guaranteed right and such education must first be made available. I believe that we as vocational educators should provide the rights of the people of our nation to secure the types and kind of vocational education that will prepare them to secure and hold the jobs in which they can become most successful. If this is true, and I believe that it is, then we have a great responsibility and a tremendous challenge. I believe it is both our responsibility and challenge to provide the facilities, the equipment, the personnel, and the instructional programs necessary to provide job-skill training to all high school students, both those who will enter employment after graduation as well as college-bound students. Also, it is our responsibility to make available continuous educational opportunities for post-high school students and adults to qualify for job skills or upgrade present skills. All this I believe should be done as a part of a comprehensive high school program.

Why is job-skill training so necessary? The reason is twofold: first, to provide students not going to college with a skill to earn a living, and second, to meet the tremendous manpower needs of agriculture, business, and industry. Today there are more jobs than skilled people to fill them. I make no claim that vocational education can take a high school student and make a finished product of him or her. But surveys and studies have proven that we can make a boy or girl employable upon graduation from the twelfth grade. It is, then, up to the individual student to further improve his or her skills in some form of post-high school training which we can provide.

For many years I have been greatly concerned about the terrific waste of human resources as we have become more and more aware of the high percentage of youth who drop out of school and fail to graduate. At the same time, we should also be concerned with the small percentage of those who do graduate but who do not go on to college or seek other post-high school training. Vocational education cannot solve all the dropout problems, but research has shown that sound and attractive vocational programs most certainly lower dropout rates.

In my state recent studies show that students who graduated in recent years represented only 35.2 per cent of those who began school 12 years earlier. The other 64.8 per cent went out into a world of work without even the benefit of a high school education. Of the 35.2 per cent who graduated, only 32.9 per cent or approximately one-third went on to college. On a national basis I am told that about 50 per cent of those who enter the first grade remain to graduate and that only about one-third of these go on to college. These statistics emphasize the opportunity and the challenge we have to prepare high school students for job entry and to prepare dropouts, post-high school students, and adults for jobs or to upgrade their skills in their present jobs.

It is my belief that the vast majority of schools in our nation offering vocational training have been limited by finances, space, equipment, and trained personnel to expand and offer the courses demanded by current times. These limitations have made it very difficult for most high schools to provide, in a single school system, a wide variety of courses to qualify students for job skills required by agriculture, business, industry, and other occupational fields.

Efforts to find a solution to these limitations led to the development of the area center concept. Passage of the Vocational Education Act of 1963 which provided matching funds for construction gave impetus to the area centers. When I speak of area centers, I think of two kinds or types of schools. The first is the area school that offers both vocational skills and the basic or academic skills that qualify students for a high school diploma. The other type is the center where students take basic education subjects in their home schools and are transported to the area center for vocational instruction or related work experience in the school shops and laboratories. Which type of center better serves the people varies with conditions within the states. The density of population and the distance between schools are perhaps the most important factors in making a determination. In my home state students take their basic training in their home schools and are transported to the centrally located area center for their vocational training and work experience.

The area center does not eliminate previously established courses at the local high school but serves to expand present offerings by adding new courses and special courses that cannot be economically provided in an individual high school. It is not a device to consolidate all vocational training under one roof or at one location.

The area school offers many advantages over single-school programs. The centrally located center:

1. Makes vocational education available to more students.

2. Is more economical in that only one facility and one instructional staff is needed. In addition, one set of equipment serves several high schools.

3. Provides for a broader curriculum and gives students a wider choice of courses.

4. Provides for more and better vocational guidance.

5. Provides for the development of a more flexible vocational curriculum to enable students to receive instruction in other vocational areas which are related to their major fields of interest.

6. The area center with its new and modern facilities greatly improves the image and status of vocational education and brings pride and prestige to the community and the students by dignifying preparation for occupational life.

Since the passage of the Vocational Education Act of 1963, much has been and is being accomplished in the establishment of area centers throughout the nation. The 1967 Annual Report of the Department of Health, Education and Welfare states ". . . Approximately 1, 100 area vocational schools have been approved for construction or expansion since 1963 Act funds became available. In fiscal 1966 there were 350 projects funded for construction, expansion, or remodeling of 237 separate school plants. Combined local, state and federal spending for construction during fiscal 1966 was $160, 615, 345." Provisional reports indicate 373 projects for construction, additions, or remodeling at a cost of $193, 340, 578 in local, state and federal funds for fiscal year 1967.

In addition, the 1967 Annual Report of HEW states ". . . The Appalachia Regional Development Act of 1965 supplements the federal funding of vocational and technical school construction in all the counties of West Virginia and specified counties in 11 other states. Since fisal 1966 when funds became available for this purpose a total of 86 projects have been approved and funded using $30, 341, 704 appropriated under sections 211 and 214 of the Act."

In South Carolina we have 14 area centers in operation with eight more under contract and scheduled to be completed by September 1969. The costs of the 22 schools vary from $400, 000 to $1, 000, 000 each. Projected plans call for 52 schools within the next five years. To date a total of $13, 701, 186 has been expended and/or earmarked for construction of area centers since the passage of the 1963 Act.

As a director of vocational education, I have always believed that an area vocational education center should serve all the vocational services an should not be designed to just prepare people to work in industry. Every service should be included in plans for the construction and operation of a center. The center is ideal for providing occupational agriculture to both youth and adults, and in some few school districts might well serve both production and occupational agriculture.

In states where little or no construction funds have been used for expanding vocational education, I urge that when additional funds become available under the amendments to the 1963 Act that a portion of the funds be earmarked and budgeted for the expansion of programs through the use of the area vocational education center concept.

OHIO's JUSTIFICATION FOR AREA VOCATIONAL CENTERS

Byrl R. Shoemaker
State Director of Vocational Education
Ohio Department of Education
Columbus, Ohio

Vocational education is growing in Ohio. In 1963 we had 47,000 youth and 92,000 adults enrolled in vocational education programs. In addition, there were 328 full-time students enrolled in post-high school technical education. We had no joint vocational schools or area vocational centers. There were only seven vocational high schools in the larger cities. In 1968 we have thirty-four joint vocational school districts, seventeen of which have been funded. We have 105,000 high school youth and 165,000 adults enrolled in vocational education and perhaps what is the greatest chance for a broad expansion of vocational education in Ohio that we have ever had.

Early national legislation on vocational education (Smith-Hughes Act of 1917) was justified by the need for skilled people for industry and agriculture. The Vocational Education Act of 1963 added a new dimension. That dimension focuses on the social problems of our day. It does not ignore skills and technical knowledge but it does add a totally new dimension. We are not only required to teach skills and technical knowledge, as emphasized in the early legislation, but now we must provide remedial education and rehabilitation. The emphasis is on the whole person and the employability of that person.

Since 1918 we have focused our efforts in vocational education upon the average and the above average student. We have said that we should not take students who cannot fit into jobs for which we are training. Some people are asking these questions: Who is going to train the persons who you do not? Who has more to offer for the less able student than vocational education?

We are no longer in a period in which a man can look as in 1918 to having one job for life. Now many individuals must look upon the possibility of changing jobs many times. In vocational education we are moving from a period in which we served comfortably a few youth to a point in which we are being asked to serve a majority of the young people in high schools. We are now in an entirely different ball game. The reaction of many is that only serving 25 to 30 per cent of the young people in vocational education is not enough. How are we going to serve not just those whom we want to serve? How are we going to serve in vocational education at least 50 per cent of the young people in the schools of Ohio?

We have come through a period of time in which we emphasized production agriculture and home economics in rural areas. In the major cities trade and industrial education and business education were almost ignored as a vocational area. The challenge now is to have a total program of vocational education in the major cities, in suburban areas, and in rural areas. The largest program, in terms of enrollment, of vocational agriculture in Ohio is in Cleveland.

My observations are that one of the best general education programs in our state has been a vocational agriculture program along with a strong FFA program. I am willing to say this as a person outside the field. Yet I have heard people say that this record will not keep us in business. What is being asked of vocational education is that people be trained to go to work. Any vocational program which does not result in young people going to work or going on to some further training in that occupational area is not going to be looked on with favor by state legislatures or by the Congress. But there is a problem with vocational agriculture and home economics. Every time I think we have it put to bed, it comes back again. The continuing comment about homemaking and vocational agriculture at the national level is in terms of the importance, the critics say, of job training.

In Ohio there is not a lessening of importance in the area of production agriculture. Its importance is going to be greater but we are not sure there is going to be more people in production agriculture or that we will train as many people in this phase of vocational agriculture as before. But how do you tell a group of people they are more important than ever, but at the same time tell them that they will not grow in numbers? There is need for massive growth in other areas of agriculture. Even though we do not project growth in Ohio in production agriculture, we do project growth in the total program of vocational agriculture.

As you in agricultural education move into the new occupational areas other than production agriculture, you need to look at an important orientation that is concerned with bringing all of vocational education together. There are three elements that make up any vocational program whether it is distributive education, business education, trade and industrial education, or agricultural education. These three elements are (1) skills of an occupation, (2) the technical knowledge important to perform the skills for that occupation and understanding new things that come into it, and (3) a common core of general learnings in terms of work habits and other general knowledge. This common core of learnings can be taught in any program. These are the three functions that I will discuss with you.

In the production agriculture field, you provided the technical instruction in school. Essentially you provided skill instruction on the farm and outside laboratory. As far as the student was concerned, you expected him to learn skills not in school but in his work on the farm. Then you taught very well, as well as any group in education, those general common learnings that we expect young people to need. I think that you in agricultural education have done this better than any area of vocational education.

As you move into other areas of agriculture--horticulture, floriculture, landscaping, gardening, agricultural mechanics, agricultural business, and other areas--I believe you will find that you will have to provide the laboratory within the school facilities or through the use of the agricultural businesses in the area. This will bring a change in your program if you agree with the concepts I have stated. As you move skill training into the school, you do not accomplish this task in the same amount of time as you did before when you were only concerned with technical instruction. This means laboratories, shops, and facilities of the type important and necessary to prepare people for work. I do not mean teaching horticulture with one flower pot just because you can teach the principles with one flower pot.

If you agree with this concept, how many of the so-called comprehensive high schools can provide the facilities and equipment necessary to offer the breadth and number of different programs in agriculture needed at the present time? We have 700 high schools in Ohio averaging a little over 400 students in enrollment. You cannot provide in these high schools both a comprehensive and a vocational program which are necessary for a comprehensive educational program. I believe that the so-called comprehensive high schools have failed. They have failed because they were not comprehensive high schools. How long can we live with a system which reacts to every challenge with "let's make it harder, then it must be good," instead of "let's make it more relevant to today's needs and today's requirements."

In the pattern of area vocational centers in Ohio we have said that vocational education is a core program. We say that you take a student's occupational goal (he makes that choice) and the student. Then you build around that the technical knowledge and the work habits and attitudes needed for employment. Then add the required academic subjects necessary for graduation. This becomes a total educational program. To do this most effectively, you could do it as a whole in an area vocational center. We have moved, therefore, to the concept of an area center program involving a full day but in which students remain members of their home schools for football, baseball, basketball, band, track, orchestra, and for graduation. We have said give us that young person for the full day; let us integrate his education and not make him either vocational or academic. I say let me have the student, then build a total program. If he needs remedial education, let's give it to him; if he needs rehabilitation, let's give it to him; if he needs mathematics or science, let's give it to him in terms of his occupational interests But some say he might not be able to go to college! He might not be able to go to some colleges, that's right. Actually there is little correlation between success in a college preparatory program and success in college. Why worship then at the altar of the college preparatory program? But some of our own people are scared to death to get their programs expanded to the point where students cannot get a college preparatory program.

I say we should look at the needs of the young person with an occupational goal and build around that goal. If necessary we should take three-fourths of the student's day for that block of time necessary for vocational education. If you believe that vocational education is good education, if you believe research, if you believe that you can provide for the skills, the technical knowledge, the work habits, and the attitudes through a vocational program, I suggest our area vocational school concept as an approach.

In the area vocational centers we have organized so far, we are following the concepts outlined by Mr. Anderson. We do not have trade and industrial education centers in Ohio. We do not have business education centers. Our centers are vocational education centers. We hope to have represented every vocational area. We believe that coming together on an area basis we can provide more different opportunities for programs than can be provided in individual local schools. This takes willing leadership and I am proud of the leadership in vocational education in Ohio.

What I am saying is a full-day program at the area center has a better chance educationally to do a total job than the half-day sessions. This takes state legislation that will permit this arrangement. Local schools in Ohio are not at the present time penalized for sending students to the area center. Local schools are not penalized with the foundation program any more than if the student remains in the local schools.

We have initiated programs in area centers on a broad basis. Some of the programs in agriculture take three-fourths of a student's day. All students graduating from the area vocational centers have a first rate high school diploma. All are eligible to enter the universities within our state.

I believe deeply in vocational education because I was a product of the classical high school. Don't tell me about the values of four years of Latin--I had it. Don't tell me about the values of an additional year of German in high school--I had it; four years of science, I had it; four years of mathematics, I had it; and when I went out to look for a job, I was asked one question: What can you do? They were not interested in my four years of mathematics, my four years of science, my four years of Latin, or my one year of German. When I finally did get a job in a shop, I found out that my classical mathematics and science weren't worth very much. A fellow down the line who had not graduated from high school but who had been taught to use "The Machinist Handbook" was so much ahead of me in the functions of mathematics and the principles of science that I could not catch up.

I believe that too many of us in vocational education still worship at the altar of the classical disciplines. Some vocational educators are too worried that our graduates might not have all the courses necessary to get into college. I am worried more about the young people who graduate from high school who want to go to work. I think there is adequate research and study which says if you prepare them well to go to work and they change their minds and go to college, and if they have what it takes to get through college, they will make it.

RESOURCES FOR AREA VOCATIONAL CENTERS

William L. Ramsey, Director
Milwaukee Technical College
Milwaukee, Wisconsin

An area vocational center is an organization whereby the people of an area (often represented by local school districts) pool their efforts in order to offer a comprehensive vocational program to the people of that area. A vocational program is defined as an offering that provides training and education to a person in order that he might better make a livelihood and become a productive citizen for society through some level of skill. A resource is that which provides help or aid to an organization, institution, project, or concept. There are many resources that help or aid the area vocational school center. I have tried to organize them categorically in nine divisions.

Philosophical Resources

The philosophical resources include the identification of the need for vocational training as presented by business, labor, and industry. These needs are real, and a must if they are to remain competitive with others at home or abroad. The individual citizen also presents his or her need. These may be individuals who have a skill that has become obsolete, individuals who are employed or unemployable, on public welfare, or who are handicapped and need vocational rehabilitation. The philosophy of any area vocational school must have this impetus from individuals and from business, labor, and industry. It must establish a philosophy to meet these needs. It, therefore, must be a student-center oriented school as well as a business and industrial-oriented center.

Lay Governing Board Resources

Another important resource is the dedicated leadership provided the vocational concept through lay board members. These board members must be selected in some manner that is non-political. These are practical-minded men and women who provide a leadership resource in policy-making that will guide the school through its administrators.

Administrative Resources

The resource person for the board is the chief executive of the school. His dynamic leadership must be reflected in the policy-making of the board through his recommendations. All the administrators should be together in their immediate long-range goals. The administrator must be a generalist looking at the overall program; he must know the individuals; he must know the total educational spectrum and how vocational education fits into the total spectrum. He must know and appreciate the industrial and business world and the participation between labor and management. The administrator must be a dynamic, constructive force as a resource of the area vocational center.

Political Resources

The fourth resource is the political. The people who make the standards, the rules and regulations, the policies, and the laws must be a part of the area vocational center or be knowledgeable about it. This includes the local political office-holders such as the County Commissioner, the Township Trustees, the municipal officers, and other officials. Close communication must be conducted with the state legislators for they are key persons on the future progress of the school. United States Congressmen are becoming increasingly more important since the Federal Government is becoming more active in the vocational educational picture. If the area vocational school is to succeed, the relationships and communications to the participating local schools is very important. The concept of the area vocational school being a branch of the participating school to make it more comprehensive dictates this concept and is paramount.

Curricular and Facility Resources

The fifth resource is curricular with the closely related need for facilities to present the curricular program. What is to be offered in the area vocational school is of great importance. Advisory committees representing business, labor, and industry are vital to curriculum construction. Resources from the State Department of Education are valuable in this task. Surveys of individual needs, aptitudes, and interests are factors that must be considered in the over-all curriculum construction. Once the curriculum has been determined, these same individuals and groups can advise on the equipment and the other specifications that are needed to house the educational program. The curriculum and facilities must be very flexible in order to change, be modified, and to meet new needs in a fast-changing technological society.

Financial Resources

The curriculum and facilities will help dictate the fiscal needs of the area vocational school. The financial resources to achieve this goal are of great importance. These are local, state and federal, and philanthropic. Local support can come from many sources. It can consist of donations, student fees, tuition from member schools, and local millage either inside, outside, or both. Millage for area vocational schools has been both assessed or voted upon. The voting of outside millage for area vocational schools has been both successful and unsuccessful. Generally speaking, it has been unsuccessful. This has led to many other alternatives such as inside millage, assessed outside millage, full-state support, tuition on a per capita basis, and pro rata on a per student basis by participating schools. My opinion is that the voted measure will find little success as long as it is competing with other taxing authorities that affect lives more directly such as the public school system in kindergarten through grade 12. Other financial resources that always need extra care and communication are the state sources through the legislature and the state departments of education.

In addition the Federal Government has a great deal of influence through the Vocational Education Act of 1963 and the preceding acts. The money from the state can be both operational and for capital outlay. The goal is presently aimed at 50 percent in both areas. The federal acts provide some operational money (about 5 to 10 percent). The goal is aimed at an increase in this percentage for special programs such as work-study, teacher training programs, and other special projects. The present goal in capital outlay from the federal government is 50 percent. This 50 percent matching theory has never been able to function to meet all area vocational needs in the states. Philanthropic organizations have always been keenly interested in special programs and experimental projects.

Personnel Resources

The resources for personnel to staff the area vocational school have come primarily from business and industry. The need for a combination of business and industry experience and education is vital but scarce. The person from the actual trade area who is hired for the teaching position lacks the knowledge and understanding of the growth and development of human beings as well as the motivational aspects of learning. The educator lacks the knowledge and experience in the trade area. The combination is the answer. Therefore, we take people from the trades and train them in the educational aspects. We take educators and give them the trade experience. Another important resource for the improvement of the vocational program is the teacher after we hire him. We must utilize him and his ideas for improvement of the area vocational school.

Student Resources

The eighth resource area is the student. Surveys have indicated that 50 percent of our students in the United States desire some type of vocational training. Only 30 percent of our students go to regular four-year colleges and only 14 percent of our students graduate from college. Then again, there is nothing to stop the vocational high school student from going into college. In fact, a drafting or electronics student from a vocational school may do better in college than he would if he took the same college prep curriculum that has been in existence in many of our high schools since the 1800's. The things that must be impressed on our students and our area vocational schools is that they follow their area of interest and aptitudes. In addition, whatever occupation they select, they must aim to be the best and to not become too alarmed if upgrading or some retraining is necessary the remainder of their life to remain the best.

Community and Public Relations Resources

The last area of resources for the area vocational school is that of community and public relations. Much of this resource area has been taken care of in the other eight mentioned. For if the resources indicated earlier are used correctly, communication and contact has occurred with the board, the administration, business, labor and industry, advisory committees, state departments, local, state and federal officials, staff, students, participating schools, and all of them built on a sound philosophical base. The only important resource that has not been mentioned which is vital to the total development of the area vocational school from the inception of the concept to the everyday operation is the news media, or the media of communication. A mutual relationship is a must and has to be based on trust and faith in one another in the community and in the concept that the community has a right to know--they are stockholders, and they must evaluate the progress of the organization as it strives to meet its needs whether it be needs of the individual or the needs of business, labor, and industry.

Summary

It must be a universal goal to meet the needs of individuals while meeting the needs of business, labor, and industry through occupational education that prompts the people of an area to form a cooperative venture. The rapid results of this cooperative effort is a lesson in what can be accomplished when people put aside their provincialism to work for the common good--the common good of society and the common good of each individual.

DETERMINING THE NEED FOR AGRICULTURAL EDUCATION IN AREA CENTERS

Harold L. Noakes, Chief
Bureau of Agricultural Education
New York State Education Department
Albany, New York

It is a real privilege and pleasure to have the opportunity to discuss the matter of determining the need for agricultural education in area occupational centers. This discussion is based on the assumption that the area center has already been decided upon and the question is whether to include agricultural education.

For the purpose of this discussion it is also assumed that the agricultural courses to be offered at the center will be on the secondary level. A further assumption is that there are several high schools in the area to be served by the center. We have been given no further guidelines such as the geographical size of the area included or the nature of the area in terms of population, agriculture and industry. For this reason we need to consider general guides or factors even though all may not apply to a specific area.

There are at least four major factors to be considered when establishing agriculture in an area center. These are: employment opportunities; groups to be served; interest of potential students in agricultural training; and courses to be offered. Let us take a close look at each of these.

Employment Opportunities

Much has been learned over the past few years relative to the employment opportunities in the broad field of agriculture. This includes not only production agriculture but the off-farm agricultural occupations as well. Across the nation, states have participated in research studies to determine the nature and extent of employment opportunities in off-farm agricultural occupations. From these studies come much information which has a bearing on our problem.

These studies show clearly that agriculture is a vital, growing field with hundreds of identifiable job titles. Agricultural jobs cover the total employment spectrum from unskilled to professional. It became equally clear that no program could attempt to provide training in so vast a number of job titles.

Some of these studies identified competencies needed by workers in off-farm agricultural occupations and classified these in terms of occupational families. Fortunately for the development of area centers, it was apparent that these various job titles could be classified into seven occupational clusters in agriculture.

The employment opportunities can be classified into these seven areas: agricultural products, agricultural production, agricultural mechanics, agricultural resources, agricultural supplies, forestry, and ornamental horticulture.

A study should be made of the geographical area to be served by area centers to determine the answers to such questions as what are the agricultural occupations, number of persons employed, and employment outlook. Because of the limited number of job opportunities in a given area and the mobility of our population, it is well to consider employment opportunities beyond the area to be served by the center. Statewide and national studies have value particularly in looking at future trends. The opinions of recognized leaders in agriculture should be obtained and considered when planning an area program. There are certain occupational families which have great potential growth. This information can be obtained from far-sighted leaders.

An example of this in New York State is the potential growth in the development, operation, and management of outdoor recreation facilities. Leaders in the state predict that this will be one of the most rapidly developing areas of employment. This opinion is based on the location of the state in relation to large population centers and the development of a system of high-speed highways. This is coupled with increased leisure time. The area center can obtain professional assistance in determining the occupational need from the state department of education and from universities.

The employment opportunities in the various levels of employment in each employment area should be considered. The levels of employment usually considered are unskilled, semi-skilled, technical and professional. It is desirable also to determine the extent to which advancement from one category to the next is possible.

Groups to be Served

The passage of the Vocational Education Act of 1963 brought new challenges and responsibilities to agricultural education. We have the broadened responsibility of training all persons who can benefit from knowledge and skills in agriculture. The groups to be served in agriculture include:

1. Persons with special needs including those who are potential drop-outs, mentally retarded, socio-economic disadvantaged, physically handicapped, and emotionally disturbed.

2. In-school students training for occupations in agriculture.

3. Out-of-school youth and adults seeking to prepare for an agricultural occupation or to improve themselves in the agricultural occupation in which employed. These groups include young men out of school becoming established in farming, adult farmers, and out-of-school youth and adults training for off-farm agricultural occupations.

Therefore, in addition to a study of the employment opportunities in the area, it is desirable to study the nature and needs of the groups to be served. Guidance personnel of the area center and participating schools can be of great aid in identifying individuals who can benefit from programs designed for the various groups. The agricultural advisory committee can be helpful particularly in reference to out-of-school individuals. Federal and state agencies have many contacts with out-of-school persons who could benefit from specialized agricultural programs.

Interest of Students

Possibly the most important factor in determining the needs for agricultural education is the interest of students in training for agricultural occupations. A common response received when contacting a school to participate in an area program is that students have no interest in agriculture. This response is largely due to the fact that the image of agriculture is "farming" to many school administrators and guidance personnel. An agricultural program in an area center has little chance of success, regardless of the employment opportunities, unless students have an interest in training for agricultural occupations.

Several states have developed student interest inventories or scales for determining potential enrollments in agriculture. For a number of years in New York State we have used a rather unsophisticated device as an aid to predicting enrollments in agriculture in area centers. Even though it is simple in design and easily conducted, this type of study has been an important factor in establishing agricultural courses in area centers.

This interest inventory includes five major employment fields of agriculture including agricultural machinery and mechanics, agricultural sales and service, farm work, operation and management, ornamental horticulture, and forestry and conservation. Under each heading is listed a variety of activities performed by persons employed in the field. Under each heading students are asked to check all activities in which they are interested. Finally, each student is asked to indicate a first, second, and third choice of fields of agriculture, if interested in more than one field. An opportunity is also provided for a student to indicate no interest.

A study of 12, 245 students in grades 8, 9, and 10 reveals a significant number of students interested in agricultural courses. Among the first choices of occupational groups in agriculture, boys consistently placed conservation first, agricultural mechanization second, farm operation and management third, ornamental horticulture fourth, and agricultural sales and service fifth. Girls tended to rank ornamental horticulture first, conservation second, farm operation and management third, agricultural business fourth, and agricultural mechanization fifth.

Among the excellent instruments available to study student interests in agricultural occupations are a Scale to Measure Interests in Agricultural Occupations developed by Hamilton and Hill at Cornell University; The Pennsylvania Vocational Agriculture Interest Inventory by Walker, Stevens, and Hoover, Pennsylvania State University; and The Agricultural Occupations Interest Scale, Purdue University.

Along with a study of student interest in agricultural occupations, it is also desirable to have some measure of the support such a program will receive from parents. Studies in New York have shown that parents support to a high degree the occupational choices of their children. For example, in three studies covering nine counties a total of 5, 975 parents of students in grades ten and twelve were asked the question, "Do you approve of the choice of vocation or occupation made by your son or daughter?" Of these 94 per cent replied in the affirmative. Such studies indicate that parents can be expected to support occupational programs in area centers.

Courses to be Offered

The need for agricultural education in an area center must eventually be identified in terms of courses appropriate to the needs of the area and the groups to be served. These courses normally, at least on the secondary level, are designed to prepare a student for entry into an occupational cluster. There is considerable variation possible within each course to adapt it to the needs of a specific area center.

An example of this may be found in the training program in ornamental horticulture. This course may include instructional areas in landscape planning, greenhouse management, turf management, floral design, nursery production, and others. This allows for considerable latitude in developing a course in ornamental horticulture for an area center. Emphasis may be given to those instructional areas which are appropriate and for which there is a need. The student interest study can be a valuable aid in determining the agricultural courses for which there is potentially, at least, sufficient enrollment to make the course feasible.

With this information it is possible to anticipate needs in terms of staff, facilities, equipment, supplies, and land resources to establish agricultural education in an area center. While it is possible to determine the agricultural courses needed at an area center, the actual participation by students will be influenced by such factors as:

1. Administrative support to the area center by participating schools as evidenced by flexibility of scheduling classes and transportation of students to a center.

2. Quality of the instructional program at the area center in terms of instructional staff, facilities, equipment, and land resources.

3. Convenience to the student.

The needs for agricultural education in area occupational centers or vocational schools will vary from one part of a state to another as well as from state to state. Regardless of these variations we have the constants including jobs that need to be filled by competent workers and students who need training to fill these jobs. This seminar can play a vital role in enabling states to balance this equation.

REPORT OF TASK FORCE

Agricultural education contributes to the area vocational center in the following ways:

1. Agricultural education is needed in vocational education centers in order to provide training for students who desire and can profit from it.

2. A wider selection of specialized and advanced courses can be provided.

3. Area programs provide additional trained and competent workers in many of the agricultural occupations where a shortage now exists.

4. Programs can be more flexible and better correlated with employment needs.

5. Area programs provide a wider variety of adult education.

6. Agricultural education can complement other occupational areas in area centers.

Strong local programs of agricultural education are essential to success of programs in the area center.

The success of the area center program depends on occupational needs, interest of students, and employment possibilities.

The area center should serve as a means of expanding and further developing the services that can be offered in agriculture at the secondary, post-high school, and adult levels and for those persons with special needs rather than to eliminate or consolidate agriculture departments in participating high schools.

Agricultural education personnel should take the initiative and be a part of the team in planning, construction, and operating area vocational centers.

Agricultural education personnel are best equipped to organize and conduct studies which determine agricultural education programs to be offered in the area vocational centers.

Vocational programs in participating high schools are essential to successful area vocational center programs. Programs in local high schools should be funded on an equitable basis.

COORDINATING THE AREA AGRICULTURE PROGRAM WITH OTHER AGRICULTURAL EDUCATION PROGRAMS

Summary*

The expansion of vocational-technical area schools and centers creates an excellent opportunity for specialized courses in agriculture to be offered which support and supplement instructional programs in agriculture provided in local schools. The need for agricultural education in area centers is accepted, and with proper development and coordination, specialized programs can be offered that add to the total program of vocational education in agriculture.

State and Local Cooperation

Coordination and cooperation between the state staff in agricultural education and local schools, particularly local departments, is very important in developing instructional programs in agriculture in area centers. This coordination will aid in providing programs that add to and improve offerings in local schools. State plans should be developed which project the need for agricultural education in the state. These plans provide guidance in deciding what specialized courses in agriculture should be provided in area centers. In addition, funds from state-level sources should be provided to aid in local planning. State staffs should also develop curriculum and course guides for new and specialized programs of agricultural education.

Responsibilities of Area and Local Schools

Teachers of agriculture and administrators in local schools and advisory committees should be involved in planning, developing, and expanding instructional programs in agriculture in area centers. This cooperative effort will help insure that programs in area centers supplement the offerings in agriculture provided in local schools. Such an arrangement also insures that programs in local schools contribute to programs in area centers. Agricultural education in area centers provides an excellent opportunity for expanding course offerings in agriculture to students in local schools. Particularly is this true for specialized courses in agricultural mechanics, horticulture, agricultural business, agricultural products, agricultural resources, and forestry. In communities where opportunities are limited for cooperative employment experience in businesses, area programs may substantially increase opportunities for cooperative on-job training programs for students enrolled in vocational agriculture.

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*A summary of seminar sessions relating to this topic. Presentations concerning the topic and task force recommendations follow this summary statement.

Leadership development programs should be a part of agricultural education in area centers. FFA chapters are being developed successfully in area centers; however, experience indicates that it is best to wait for the demand by students for leadership-type organizations rather than forming an organization at the time the instructional program is initiated

THE RELATIONSHIP OF VOCATIONAL CENTERS TO TECHNICAL EDUCATION

Howard Sidney, Chairman
Agricultural Division
Agricultural and Technical College
Cobleskill, New York

It is an honor to participate in the seminar and to discuss technical education with distinguished agricultural educators. The conference is timely since we are in the midst of a period of transition in our high schools.

It is becoming increasingly difficult to staff and operate the small high school. Parents and students are no longer satisfied with limited curricula selections and inadequate facilities. Vocational centers and comprehensive high schools are being established to meet the vocational needs of high school students. The comprehensive high schools and vocational centers can offer broader opportunities in vocational education, and hopefully the excellence and quality established by vocational agriculture.

The larger units--vocational centers and comprehensive high schools--with additional vocational curricula will affect agriculture in our high schools. The reorganization to larger units creates an opportunity for agricultural educators. It will be possible to teach agriculture, vocational agriculture, and agricultural occupations according to vocational objectives. Faculty can be professionally prepared and can have occupational experiences relative to their instructional specialization. Students can be counseled and selected for vocational programs according to their interests and abilities.

I am interested in the area vocational school and the comprehensive high school. First because of the value to the student and to agricultural education, and second, for the pre-technical training to prepare students for agricultural programs in the two-year colleges.

Agricultural Technical Programs

Agricultural educators have a fairly common understanding of the terms "vocational" and "technical." The words written as "vocational-technical" may infer that "vocational" and "technical" are one and the same. Both "vocational" and "technical" are occupationally oriented. The objectives for "vocational" and "technical" are not the same--there is a difference and sometimes it is difficult to draw a clear-cut line showing where "vocational" ends and "technical" begins.

A technical program of quality and excellence applies the physical, biological, and social sciences as well as communication arts to the technical major. Agricultural educators must develop this philosophy if they expect to play ball in the big leagues, and be accepted as leaders in technical education. Informed educators are no longer questioning the need for technical graduates for agricultural occupations. Many agricultural educators and industrial management people are solidly behind technical programs in the vast business of agriculture and natural resources. They realize the acute need for people with this type of education.

We do not need to sell technical education to agricultural educators or to leaders in agricultural industries. The need has become so apparent and urgent that there is a possibility that programs will be established without ample preparation.

Location of Technical Programs

Technical curricula for agricultural occupations are being developed in technical institutes, community colleges, post-high school vocational-technical schools, and divisions of four-year colleges. There are only a few technical institutes offering agriculture. Of the 900 two-year colleges in the country, most are of the community college organization. In general the community colleges largely offer transfer programs; however, there is no set pattern in existence. There are some community colleges doing an excellent job in technical education. Three of the states are requiring by law that the community colleges devote part of their instructional programs to vocational and technical offerings. The community colleges probably have the greatest potential for technical curricula in terms of coverage and meeting local occupational needs. The thirteenth and fourteenth year "vocational-technical" schools are in existence in some states. The programs I observed in these schools were excellent. The objectives and philosophy made it possible to establish programs of the length and content needed according to the occupational competencies and skills required of the graduates. The vocational-technical schools are not bound by tradition, status, or degree-consciousness and therefore may be more inclined to implement innovations.

In 1960 sixteen of the four-year colleges of agriculture were offering, or in the process of establishing, two-year technical programs in agriculture usually in a separate division in the four-year college. We can have successful technical curricula in any one of these various types of institutions. The pattern should not be the same but designed relative to the agricultural industry, population concentrations, existing institutions, and other local factors. The location of technical curricula is not as important as the philosophy, objectives, facilities, administrative support, and programs to meet the needs of the people to be served.

Strengths of Institutions for Technical Education

Technical institutes are most likely to have the philosophy for the type of education necessary and administrative and faculty support needed. They usually serve the state or a broad area.

Administrators and governing boards of community colleges are very sensitive to local needs. The faculty can be assured of excellent support from advisory committees. It is frequently difficult to establish adequate coverage for the agricultural occupations in the community colleges. The community college is usually supported by a city, a county or counties, or school districts and is limited to a particular area. This frequently limits the number of students for agricultural programs and makes it difficult or impossible to finance faculty, college farms, and the sophisticated and expensive laboratories and equipment for the technical programs in agriculture. This has been solved in a few states at the state level. Transferring students between community colleges creates administrative problems and most of these colleges lack dormitories, dining hall facilities, and weekend programs to accommodate resident students.

The vocational-technical schools I observed were excellent. This is probably because of their newness and the awareness of the needs of all people in the post-high school institutions. The administrators of these schools were very receptive to programs according to the needs of students. There was a very close working relationship between high schools and vocational-technical educators and a fresh eagerness to make the schools successful with less concern for acceptance, status, and degrees. The limiting factor would be the area served similar to that of the community colleges.

The strengths of technical programs in four-year colleges are excellent facilities, faculty, and established reputations. The objectives for technical programs in agriculture, because they are entirely different from the baccalaureate degree, graduate work, and research are not always accepted by the administration and faculty. Since the technical programs will not usually be the primary objective of the four-year college, the question may arise of ample funding when budgets are tight. Which will come first, research, graduate work, the four-year programs, or the two-year technical program? The only limiting factors possible in our four-year colleges will be acceptance by faculty, the philosophy of technical education, and funding.

Factors for Consideration

1. Both post-high school vocational and technical programs may not always be compatible using the same facilities and faculty.

2. There may be a need for cooperation between states for teacher education. It is difficult to serve the limited number of teachers created by specialization in technical programs.

3. There is a need to eliminate the unnecessary conflicts between the objectives of technical education and the desire for transfer credit from the technical to the four-year programs.

4. Professional improvement opportunities and occupational experiences for post-high teachers need to be provided. Accurate job descriptions for assistants and aides to teachers to clarify teaching positions, the profession, and to provide adequate salaries for assistants are needed.

5. Leadership activities for students in post-high school programs should be provided.

6. There should be an accumulation of data to substantiate the need for programs. Employment records of state employment offices may not show jobs available at the technical level.

7. We need to inform administrators of the need for adequate laboratories and facilities such as college farms, specialized shop facilities, greenhouses, testing laboratories, and laboratories housing equipment students must understand and be able to use in their technical specialization.

8. Curriculum development for technical education goes beyond the vocational center and high school. The technical programs cannot be warmed-over high school programs or they will fail.

Emerging Technical Curricula

We have just started to establish technical curriculums for farming and the agricultural occupations. The following are only a few of the possibilities. Most of these have been started in recent years.

Agri-Business Technology
Agricultural Business Technology
Agricultural Chemical Technology
Agriculture Technology
Agricultural Equipment Technology
  including options in Power Equipment, Farmstead Mechanization, and Agricultural Light Industrial Equipment
Biological Laboratory Technology
Dairy Production Technology

Farm Crop Production Technology
Fish Culture Technology
Floriculture Technology
Forestry Technology
Wood Utilization Technology
Food Processing Technology
Dairy and Food Science Technology
Grain, Seed, Feed, Elevator Technology
The Horse Industry Technology
Small Animal Laboratory Technology
Landscape Technology
Livestock Production Technology
Ranching Technology
Marine Life Technology
Nursery Management Technology
Ocean Fishing Technology
Orchard and Vineyard Technology
Poultry Technology
Management of Recreational Lands Technology
Soil Reclamation Technology
Turfgrass Technology
Wildlife and Conservation Technology
Agricultural Communications Technology
Agricultural Aviation Technology
Agricultural Pesticides Technology
Pest Control and Extermination Technology

A study of agriculture and natural resources will reveal there is a need for other technical programs which have not yet been conceived. We are neglecting the business of farming, and we need many programs for young farmers at the post-high school level. Technical programs in no way conflict or interfere with young farmer and adult education programs.

The Technical Education Movement

The first school which developed a technical program in agriculture was started at Joliet, Illinois. However, most programs were started in the northeastern part of the United States with the first two at the University of New Hampshire and Stockbridge, Massachusetts. These were followed by the six Agricultural and Technical Colleges which have been in existence in New York State for 50 years. A two-year technical program is now offered at the University of Connecticut, one started at the University of Rhode Island this last year, and a technical division has been initiated at the University of Maine. The movement has snowballed in the last few years. In 1967-68 there were 181 institutions offering 462 curriculums in technical agriculture and awarding the Associate in Applied Science degree. This represented a 30 per cent increase over 1966-67 in both the number of institutions and programs. There will be comparable growth in 1968-69.

The Relationship Between Vocational Centers and Schools Offering Technical Programs

There have been some recent studies on the necessity for articulation of high school vocational programs and technical curriculums. The findings are conclusive showing the need for a close working relationship between vocational centers and technical schools. The administration and faculty must continuously work together. Faculty in both institutions must know the course content, understand student experiences, and be aware of what is actually happening in these institutions.

It is natural for some students to progress from the vocational school to technical programs. We have the same situation of technical graduates continuing in the four-year college. We must work together to assure students a number of opportunities for occupational placement upon completion of high school, the vocational center, or technical programs. We must also assure them opportunities to continue for a professional education.

Vocational centers will be stronger in meeting the needs of more students if their graduates can continue in technical programs or four-year colleges, as well as having students occupationally competent. Technical education requires a pre-technical preparation for admission. The vocational centers are an ideal location for motivation, development of interests and capabilities, and instruction in preparation for continuing in the technical schools. The vocational centers and technical schools are interdependent.

REPORT OF TASK FORCE

Due to the great difference in the location of populated areas and in existing policies and state plans, general and specific statements are difficult to make. Each state must evaluate its own circumstances to determine which approach or approaches are appropriate.

Under the provisions of the state plan of each state, area vocational schools should be organized to offer specialized programs of agriculture within established geographical areas to serve the needs of the youth of the area. The area vocational school should offer training that would lead to entry level employment. This training should be concentrated in special areas not now being offered in depth by schools being served by the center. Examples would be specialties such as: horticulture; agricultural sales, supplies and services; forestry; farm management; and agricultural equipment and mechanics.

Area vocational schools should cooperate with and encourage participating schools within the district to offer equal basic vocational agriculture educational opportunities.

In the formation of area vocational schools, the state leadership should be prepared to assist in the planning of programs and in promoting cooperation and unity of the leadership involved.

All local vocational agriculture teachers along with the cooperating administrators, appropriate advisory committees, and area resources should be involved in coordinating the program for agriculture in the total area school program.

A leadership and citizenship program should be available.

Research pertaining to the following questions should be undertaken:

1. Where and under what conditions is it practical to establish agriculture programs in area schools?
2. What are the advantages and disadvantages of a half-day and a full-day program taught in the area school?
3. What are the occupations entered by graduates of area school programs?
4. Should area schools provide academic courses, related academic courses, or let this be done at the local school?

SELECTING AGRICULTURAL OCCUPATIONS, CURRICULUMS, AND COURSES

Summary*

What makes an educational program appropriate? The seminar participants generally conclude that the curriculum should provide a wide range of offerings at all levels of ability. The curriculum should meet individual needs, take into account individual differences, meet the needs of industry, provide a base for later specialization, and be adjusted to the particular situation of the school.

Curriculum selection and construction should have as its goals to give all students an equal opportunity to prepare for their occupational objective, to enhance the student's ability for continuing his education, to establish a relationship between occupational demand and the offering, and to provide programs that will not limit students geographically or economically.

Advisory committees should be utilized in curriculum development. Properly oriented and effective committees provide expert knowledge from business and industry. Advisory committees aid in establishing occupational experience programs and provide current information needed to plan and revise effective courses. Advisory committees should also be involved in evaluation of educational programs.

Area school personnel should aid in the development of curriculum guides. Student interests should not be overlooked in developing curriculum content. Vocational educators in other occupational areas can be used effectively as consultants in developing curriculums and courses for agricultural occupations in area vocational centers.

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*A summary of seminar sessions relating to this topic. Presentations concerning the topic and task force recommendations follow this summary statement.

CHOOSING APPROPRIATE CURRICULUM OFFERINGS IN AGRICULTURE

William L. Hull
Associate Professor of Agricultural Education
Oklahoma State University
Stillwater, Oklahoma

This topic may be approached from a number of different directions. For example, one could examine existing curricular offerings, placing them under a figurative microscope for inspection. Or a macro-view of area school education could be presented which takes into account the process of public school education in our society. I prefer the latter approach because of the perspective it lends for policy information. This paper shall stress curriculum initiation rather than curriculum construction.

What makes any educational program appropriate? What can an area school program do that a comprehensive high school vocational program cannot do? Who decides what programs should be offered at particular area schools? These questions and others will be approached in the following discussion. Postulates for curriculum initiation will be suggested and, hopefully, a usable policy forumulation model will be constructed.

The appropriateness of area school courses and programs depends on the structure of the vocational education system. State systems differ greatly. Consequently, area school offerings must differ from state to state. Area schools are conceived as a means of bringing public education more nearly in line with occupational needs. Public school vocational programs were indicted by the Panel of Consultants Report (6):

> High school programs have not kept pace with the increasing numbers of young people, their concentration in urban centers, or their special difficulties in entering the labor force.

The concept of area vocational schools as presented in Public Law 88-210 functions as a mechanism for funding. It attempts to guarantee a sufficient volume of students, a broad encompassing tax base, and qualified teachers sufficient for specialized diverse programs of occupational education. Public Law 88-210 authorizes the construction of area vocational education school facilities.

Researchable Problems in Area School Curricular Offerings

The construction of these facilities, separate and apart from comprehensive high schools or community junior college, has broad implications for curriculum construction.

1. Intermediate school districts are squarely in the mainstream of vocational and technical education. The financial and tactical support needed for occupational education at the area level raises practical problems of an equitable distribution of costs at the local, state, and national levels.

2. Area schools raise questions about course accreditation. A new look may be needed for accrediting courses preparing students for specific technical and occupational job titles.

3. Transporting students to the area facility requires time. Usually students enroll for at least three hours for specialized occupational preparation. One cannot help wondering what the student foregoes in the contributing high school in order to prepare himself for the labor market.

4. Area school students cause scheduling officers to go through gymnastics to provide them with the same opportunities as other students for course enrollment at the high school.

The American public is justifiably concerned about the great attrition of students from academic institutions. These dropouts must find an educational mechanism which will develop them for useful and productive lives in our society. But the separation of vocational education from academic education is reminiscent of the debate which ensued during the establishment of the comprehensive high school in this country during the late 1800's. Forcing young men and women early in their educational career to choose a one-tract curriculum from which there is no reprieve, may enhance the development of a chasm between the blue collar and the white collar worker and between the professional and the laborer. Current events on the political scene would question the desirability of such an outcome.

Area school curricular offerings must be structured to keep faith with basic tenants of American democracy. To identify these "truisms" of education the question could be asked "What makes any curriculum offering appropriate for a school system? Who or what determines the needs of school children?"

The Purpose of Public School Education

It is important to recognize the function of education as an institution in America. Its primary responsibility is to change the existing social structure while at the same time preserving that part of the culture which will be most useful for the future. This requires an ability to look ahead and forecast educational needs. In doing this, institutional leaders such as Conant represent society as they attempt to bring about change. Indeed, the recent Advisory Council on Vocational Education (13) seeks to bring about change in the educational system as a whole. Members of the Council came from all walks of life: state educational agencies, business and industry, colleges and universities, among others. Speaking for society they tacitly acknowledged one important curriculum goal of area schools, that of full employment. Society has a voice in area school curriculum construction.

Americans believe in a pluralistic society; one which will permit a student to choose an occupation commensurate with his ability without being limited by the social or economic level of his parents or the color of his skin. This freedom of choice extends to the right to change his mind and initiate a different series of courses for a different occupational objective. Americans believe in the right for each person to decide for himself where he ought to live. Consequently, the mobility of the labor force constitutes one of the difficult problems in anticipating where the student will be working and financing his educational preparation in a manner consistent with the benefits derived from that education. For example, a student may be educated as a physician in one state and set up his practice and pay taxes on his income in another state. To summarize, the citizens of this country believe the educational institution should develop each person to achieve his fullest potentials regardless of the limitations of circumstances.

Valued Outcomes of Area School Education

These educational tenets provide a powerful perspective for area school curriculum construction. The following generalizations should be viewed as postulates since there has been no attempt to provide evidence of their validity:

1. All students should have an equal opportunity to prepare for occupational proficiency regardless of where they live or their particular occupational objective.

2. Curricular offerings in area schools should enhance rather than limit a student's ability to prepare for education beyond high school.

3. An efficient relationship between society's commitments of money, technology, etc. and students' aspirations for career objectives should exist. In other words, an equilibrium should exist between the occupational demand and the available supply of qualified persons to fill any given job title.

4. Area school curriculum programs should not encourage poverty or limit the prospective employee to a particular geographic region of the country.

These postulates will be discussed in approximately the same order as they were presented. The statement of purpose in Public Law 88-210 declares: ". . . that persons of all ages in all communities of the State . . . will have ready access to vocational training or retraining. . . ." Emphasis is placed on the term all. Rural students and inner city youth should have the same opportunity to prepare for occupations as other youth. Distance usually means increased costs, and ghetto school districts lack the tax base. But such restrictions are no longer allowed to limit occupational opportunity for segments of the population. Area school curricular offerings must mesh with courses offered in high schools which contribute students to the center. A scheduling mechanism must be found to assure an area school student an opportunity to enroll in English, math and biology classes with students of similar ability. A general education in humanities and in the sciences is just as important to a vocational student as it is to a student preparing for college. A concentration on immediate short-term goals of entry-level employment could short-change the student in basic sciences, thus limiting his chances for advancement on the job or in seeking other jobs. Some students decide at a late date to enter an educational program leading to a baccalaureate degree. Vocational preparation for an occupation should be based in the sciences; accreditation procedures should be sufficiently liberal to provide credit toward an academic degree to the student for experience and vocational education.

The limitations of society's resources impose constraints on the number and kind of vocational and technical programs which can be offered in area schools. While the student may provide signals which determine approaches to area school instruction, he can no longer be the determining factor in the decision to offer a curriculum. A direct application of this principle relates to the location of specific technical programs in particular area schools. Occupational programs preparing persons for the aircraft industry need to be located in communites adjacent to this industry. It is unrealistic to expect adults to move three or four hundred miles in order to be employed. Technical education programs which are critical but expensive with relatively small demand in the labor market must be allocated to the communities which are most likely to provide entry-level employment.

Postulate number three, stated more simply, means that there should not be a surplus of people or jobs. At the present time, there is a shortage of persons for skilled jobs, such as that of a computer programer. Yet unskilled persons remain in the work force. Vocational guidance of youth needs attention: realistic career aspirations; a knowledge of themselves, their abilities and limitations; and an awareness of labor trends and needs characterize youth with efficient patterns of occupational growth.

Finally, curricular offerings at area schools should not prepare youth for employment at sub-minimal wages or tie youth to one-of-a-kind jobs. For example, the working conditions and problems of the migrant worker will not be solved by training people to be "stoop laborers." Mechanization is encroaching on this area and even now, the minimum wages do not justify training for these jobs. Jobs paying forty or fifty cents an hour as a transplanter in a greenhouse or as a car hop at a drive-in are not suitable subjects for training.

Just as a curricular offering should not handicap a student by training him for tasks which are rapidly becoming obsolete, neither should the area school curriculum limit his training only to occupations with vacancies within the school district. The mobility of today's work force increases as training and skill requirements of jobs increase. Advancing technology demands more highly skilled employees. The area school with its unique financing of federal, state and local dollars has become an instrument for increasing the occupational mobility of our society. Ignoring the migration needs of the work force does a disservice to rural youth who must travel to metropolitan areas for jobs.

The preceding discussion has attempted to describe conditions of inappropriate curricular offerings in area schools. When are offerings appropriate? What can an area school do better than a high school?

Salient Features of Area Schools

The key word in this discussion is quality. An area school can amass more easily than a high school the resources necessary for a specialized vocational or technical program. The federal dollar can insure equipment and facilities beyond the means of some local school districts. An application of this concept can be seen in what Bottoms (2) calls pre-technical programs. He proposes remedial instruction for disadvantaged students to prepare them for occupational education. Perhaps such students from small high schools could be taught more effectively in area centers.

A homogeneous group of students intent on similar vocational objectives can be sorted from the populations of contributing high school districts. These students learn more efficiently with more relevant references to requirements of specific occupations than they do in hetergeneous student classes.

Curricular offerings in area schools are more flexible than in high schools. Area schools can drop programs or initiate new courses in response to the labor market. Less attention can be paid to out-of-school activities and the requirements of general education.

More technical information can be included in three-hour sessions at area schools than in fewer hours in high schools. Such a time period provides an opportunity for cooperative occupational experiences in agricultural businesses. In area schools high school students can be prepared for pre-technical college courses or for occupational proficiency soon after graduation.

Area schools are intermediate public school districts which not only supplement the high school program but have emerged with an identity of their own. The emergence of this public school institution along with the development of technical education confounds the discrete categories of vocational and academic education. Area schools must develop a product capable of making both technical and managerial decisions required in today's occupations. Consequently area school institutions must look to sources other than traditional for leadership in their curriculum development strategies. The identification of requisite skills and abilities needed for occupational clusters plays a key role in curriculum development.

Information presented in a workshop entitled "Occupational Analysis as a Basis for Curriculum Development" conducted in August 1968 by the

Department of Vocational Education at Colorado State University holds much promise for detailed curriculum construction. At this workshop, Wimer (14) suggested assumptions for occupational planning. Among them were the following:

> That enough similarity exists in the work accomplished in any particular occupational area throughout the United States that the analysis should be a national effort. In lieu of a national effort, it should be done on a regional or state basis rather than by individual teachers.
>
> That good instructors do not necessarily have the capabilities and the abilities to make an analysis which is suitable for others to use.
>
> That an analysis should be an agreement by education and industry to be used by the administration, the instructor and the advisory committee as a basis for course content.

If these assumptions are correct, more emphasis will be placed on state planning and coordination.

Authors of a publication directed towards technical education in junior colleges (5) have the following suggestions for curriculum development:

> Make good use of advisory committees. Their work is only advisory but listen to their ideas.
>
> Consider regional cooperation in offering certain very expensive or very rigorous programs. For example, data processing, computer electronics, dental technology, might be developed regionally, with one junior college or technical institute in the region "specializing" in a given curriculum area.
>
> Develop cooperative work-study programs in some of the technical fields. Realistic training and effective placement are inherent in co-op technology programs.
>
> Put the emphasis on good programs rather than on the proliferation of programs.

A Model for Curriculum Initiation in Area Schools

A model for curriculum decision making must take into account all sources of influence on the area school system. This influence will vary depending on the particular organizational structure of the area school. For example, the area school which is a technical high school and part of a metropolitan system may not have the transportation problems of the rural area school. However, it may be more susceptible to non-rigorous courses in mathematics, science, etc. than the rural school. Business English may be taught rather than English composition. As inferred in a previous statement, student interest increases with references to tangible occupational information, but the danger of providing a vocational student with a preponderance of applied courses still exists. Technical curricula consist up to 70 percent in courses which may be considered technical and specialized to the occupation under study (10). Even the mathematical and physical sciences are usually correlated with technical study.

Figure 1 is a flow chart for planning curricular offerings in area schools. In this example, the program request is initiated at the local level by an employer in need of personnel. If he is a member of a state trade association, he may call this need to their attention. In any event, he contacts the department head or director of the local area school. This sets in motion a chain of events which attempts to validate his request. The director may seek advice from the trade association, or he may communicate directly with the state employment security office. If the information substantiates the request, the director probably will initiate a formal program request to the State Board for Vocational Education.

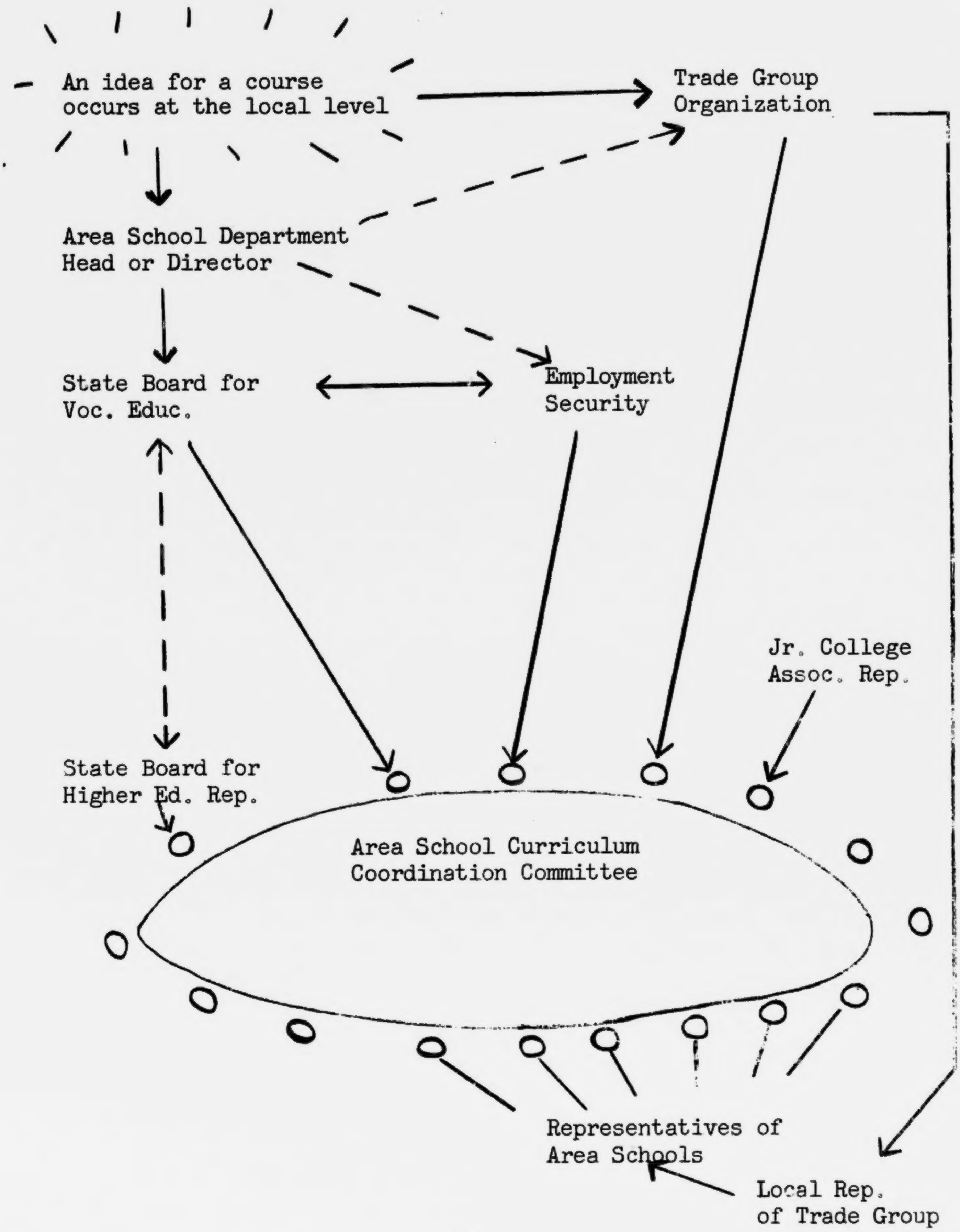
A need exists at the state level for a "clearing house" of ideas for vocational and technical courses. Representatives from the State Board for Higher Education, the Junior College Association, Trade and Industrial Organizations, Employment Security, etc. need to serve on such a committee. When an occupational preparatory program is proposed, the need for it must be evaluated; relevant information on occupational demand must be collected. Where to locate the program and at what level (high school, junior college or adult) are decisions which should be influenced by college representatives. If representatives from area schools could serve as ex officio members, ideas for program improvement could be taken directly from the committee sessions. Such a committee could be called the "Area School Curriculum Coordination Committee."

Such a committee necessarily would be more concerned with the identification of occupational needs and requirements than with the supply of qualified graduates. They could insure a sufficient number of programs existing for particular job titles. Duplication of program requests could be eliminated by comparing the demand for persons with the supply.

This organization makes no allowance for student interest in particular occupations. This is unfortunate, but perhaps students can be motivated to pursue occupational preparatory programs in the direction of greatest need. This coordination committee is primarily concerned with preventing duplication of effort, saturation of the labor market, and unnecessary expenditure of vocational education resources.

Dufty (3) studied the initiation of new programs in one technical institute in a Middle West state. He found a tendency to initiate programs in which a teacher or department head had a vested interest. Specialized communication between area school teachers and their clientele lead to an efficient communication system, but potential clients who did not have a sub-unit in the

Figure 1. A Flow Chart for Curriculum Initiation in Area Schools


An idea for a course occurs at the local level
Trade Group Organization
Area School Department Head or Director
State Board for Voc. Educ.
Employment Security
Jr. College Assoc. Rep.
State Board for Higher Ed. Rep.
Area School Curriculum Coordination Committee
Representatives of Area Schools
Local Rep. of Trade Group

school catering to their needs had difficulty in the initial phase of their contact. Dufty recommended a conscious effort be maintained to attend to the total labor market environment, "especially those parts of it which do not have specialized communication channels between them (the agencies concerned) and the Board and the Institute." Area schools need to be sensitive to changes in labor market demand. Consequently, information from the state employment security office needs to be used as a criteria for initiating new programs and evaluating old ones.

A respected educator on policy formulation, Hamlin (4) suggests:

> There is plenty of evidence already that, when a laissez faire attitude is taken and pressure groups are allowed full sway, a monstrous organization of education at this level occurs. State planning of intermediate districts is mandatory if chaos is to be avoided, but state planning must be democratic; arbitrary decisions by state officials will only make matters worse.

He was speaking of establishing area school districts; but the comments apply equally to curriculum decision making in these schools.

An effort similar to the one being urged at the state level is already underway in Washington. The Cooperative Area Manpower Planning System (CAMPS) was established in 1967 to meet the need for joint planning and coordinated action in manpower development (12). It was developed under the leadership of the Department of Labor with the participation of the Office of Economic Opportunity, the Economic Development Administration of the Department of Commerce, the Department of Housing and Urban Development, and three branches of the Department of Health, Education and Welfare. Accordingly, the President's budget recommendations for fiscal 1969 include $11 million to support the CAMPS operation.

The Area School Impact on Vocational Agriculture

The effect of area school coordinated curricular effort on agriculture remains to be seen. However, there is every reason to believe it will be favorable. A realistic review of state and national occupational needs which includes a look at underemployment as well as unemployment should result in educational programs for rural people. Probably area school curricular offerings will not be traditional high school ones.

Any area school agriculture course may be of varying lengths depending on market demand; it will be sensitive to fluctuations in labor needs and aim for entry-level employment with inservice courses for advancement within the occupation.

Area schools, and the host of implications surrounding them, force agricultural educators to justify and validate their positions more carefully. In some cases, program development in agriculture may have to look beyond the present situation to future demands for agricultural-type activities. The uses of agriculture for recreational and therapeutic effects on people show much promise. Compared to the courses in existence today, the demand for horticulture in metropolitan areas should, in essence, "explode."

Some notion of current agriculture program emphases in area schools can be gleaned by a brief review of available USOE publications:

Farm Business Analysis, OE-81010
Farm Mechanics in Vocational Agriculture, OE-81001
Food Processing Technology, OE-82016
Forestry Aide, OE-87011
Instruction in Farm Mechanics, OE-81009
Landscape Aide, OE-87010

A 1964 publication lists the following technician-level areas of agriculture: agricultural business, agricultural engineering, agricultural processing, agricultural research, sales and service, farm operator, landscape and nursery, and soils.

The effect of an area school intermediary-level curriculum on other educational institutions is readily apparent. Junior colleges and post-high school technical institutes are taking a close look at occupational education as a valid type of education for accreditation.

Such an examination should have a wholesome effect on the image of vocational and technical education, but vocational education in the high school must change. Already the tone of high school vocational education has become one of exploration. Instead of preparing students for occupational proficiency, high school teachers spend more time explaining the nature of work and exposing students to realistic demands of selected job titles. The effect of this emphasis on careers will be to prepare students to select accurately proficiency-orientated courses in area schools.

In summary, the area school concept may be viewed as a halfway house which is built on the broad base of public school education. The comprehensive high school is its foundation, but the structure has developed to meet society's changing demands. The building materials are made of fibers the traditionalists do not recognize. Instead of the hewn logs and excessive timbers of general education, this new house contains only enough course material to support the structure of entry-level occupational education. Accordingly, its occupants will constantly be in need of retooling. Unlike the neat divisions of academic disciplines, the state of this house will always be in disarray because the course components are designed to fit particular clusters of occupational tasks.

This area school halfway house has a place in society. Because it can adjust more rapidly than the educational establishment, the area school will serve well as a radar device detecting the market value of an education to society. Hopefully, curriculum change in the public school system can take its cues from the industry-orientated employment-sensitive area school.

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REPORT OF TASK FORCE

The task force proposed the following guidelines for selecting agricultural occupations curriculums and courses in area vocational centers:

1. An advisory committee on curriculum should be established to (a) utilize the democratic process, (b) utilize the expertise of business and industry, (c) advise on curriculum content, (d) aid in supervised occupational experience programs, (e) provide current information and (f) assist in evaluation.

2. Job opportunities requiring knowledge and skill in agriculture should be identified to determine program offerings and to establish rapport with business and industry.

3. Student interest in and demand for instruction in the various areas of agriculture should be investigated to estimate the number of potential students, to determine the range of curriculum offerings, and to inform potential students of programs to be offered.

4. The availability of instructors and the competencies instructors should possess should be studied to determine the extent of program offerings possible, to plan pre-service training of instructors, and to plan in-service training programs.

5. In-service teacher education programs should be provided to insure a high quality program, to upgrade instructors, and to qualify noncertified instructors.

6. Facilities and equipment should be planned to meet the needs of the curriculum to provide for flexibility as curriculums change, to provide for equipment comparable to that used in industry, to meet state requirements, and to meet the requirements of the various program offerings.

7. Articulation between local feeder schools and the area vocational center should be provided to minimize duplication of instruction, to determine the level of instruction needed, and to utilize fully the abilities of instructors.

8. Supervised occupational experience programs should be provided students enrolled in agricultural occupation programs in area centers to apply and relate instruction to actual work situations, to develop a high level of interest on the part of students, to keep instructors up-to-date with the needs of industry, to provide a source of income for students, to involve industry in the educational program, and to meet state and local licensing regulations.

9. A wide range of curricular offerings should be provided at all levels of ability to meet individual needs and differences, to meet the needs of industry, to provide a broad base for later specialized study, and to meet changes in students' occupational objectives.

10. There is a need for research relating to the following topics: (a) role of youth organizations in the area vocational center, (b) an one-half day center program versus the full-day center program, (c) are courses taught in area centers best taught at the secondary or post-secondary level, and (d) success of area vocational center graduates in colleges and universities.

GUIDANCE OF AREA CENTER STUDENTS INCLUDING FOLLOW-UP AND PLACEMENT

Summary*

Vocational education personnel and guidance personnel in the area center and in participating local districts must coordinate activities to insure that each student can become valuable to himself, to his community, and to society. Each student must be encouraged to develop to his fullest potential.

To provide needed guidance, teachers must know the fundamentals of effective guidance and be familiar with the procedures and techniques in guidance. Teachers must develop rapport with guidance personnel such that both work for the maximum benefit of the student.

Qualified vocational guidance personnel is the key to an effective guidance program. States should establish or upgrade certification standards for guidance personnel to maintain quality programs. Vocational counselors should have practical work experience and strive to maintain current information on job requirements and opportunities at all levels of training.

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*A summary of seminar sessions relating to this topic. Presentations pertaining to the topic and task force recommendations follow this summary statement.

Career orientation and exploration should begin at an early age such that students are aware of many occupational opportunities by the time they complete the eighth grade. Effective occupational information programs should introduce students to the world of work and orient them to vocational training opportunities. All school personnel should work together in presenting information about the world of work. Occupational information programs should utilize community, industrial, and staff resources to develop a better understanding of career opportunities.

GUIDANCE IN THE AREA SCHOOL COMMUNITY

Charles E. Weaver
Supervisor, Guidance Services
Division of Guidance and Testing
Ohio Department of Education
Columbus, Ohio

Each individual as a person is important. This is one of the first and foremost principles of guidance. He is important because he has abilities that can be valuable to himself, to his community, and to society. He is important because he has potentialities of which he may or may not be aware but which must be discovered if they are to be developed. He is important because he has interests which may indicate whether he will prefer to work alone or in groups, whether he will prefer to work indoors or out of doors, whether he will prefer to develop his scholastic potential for a professional type career such as a teacher, lawyer, doctor, or engineer, or whether he will prefer a non-professional carrer such as mechanic, waiter, clerk, or an aide to a professional.

Of primary importance is the belief that each person is a human being with inalienable rights and innate potentialities. In order for each individual to develop these potentialities into actualities and to become all of which he is capable of becoming, he must make choices. To make wise choices, accurate and up-to-date information is essential. Private businesses, industrial and commerical establishments, colleges and universities, local, state, and national governmental agencies are all engaged in providing information. A constant vigilance must be placed upon the accuracy of the information provided and its degree of bias. One of the most reliable sources of employment information on occupations for use in guidance is the OCCUPATIONAL OUTLOOK HANDBOOK which is published by the U.S. Department of Labor every two years. The 1968-69 edition is identified as Bulletin No. 1550, and is for sale for $4.25 by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Its 765 pages discuss more than 700 occupations which are of greatest interest to young people.

The fact that each person is important and that he must make choices will not likely cause disagreement. It may, however, raise a question as to who in our American school system should have the responsibility of assisting each individual to know himself and to make choices. Increasingly, it is agreed that this is the responsibility of the school counselor. In Ohio, a certificated school counselor is a person who has had successful teaching experience, and has earned a master's degree with courses in the areas of guidance, human growth and development, individual and group analysis, counseling, guidance information, and practicum.

With the training received it is to be expected that the counselor is qualified to help students. One of the functions of the State Department of Education is to assist school counselors in performing their jobs of assisting each student. Learning of the desires of students is a first approach. Since the early 1950's, the Division of Guidance and Testing and the Division of Vocational Education have been conducting student vocational interest surveys for high school students. During the 1964-1966 school years student vocational interest surveys were conducted in 206 Ohio high schools with responses from 57,116 sophomore and junior students. Nearly 50 percent of the students indicated that they plan to go to a baccalaureate degree granting college, but reports issued by the State Department of Education reveal that approximately one-third of the graduates actually do enroll in college and that less than one-half of those students graduate four years later. Nearly 40 percent of the sophomore and junior students indicate plans to pursue post-high school education other than college. A total of over 80 percent have plans for education beyond high school. This leaves approximately 20 percent of the students who can reasonably be expected to seek entry into the labor market upon leaving the secondary school setting.

Whether the students are college bound, whether they seek post-high school education other than college, or whether they plan to enter the labor market upon leaving the secondary school, each is important. This is true whether their homes are located in the bowels of the inner city, in suburbia, or in a rural setting. This is true whether they are black, white, yellow, or red. This is true whether their parents are economically advantaged, economically comfortable, or economically disadvantaged. Each student is important and each student must be made to realize that he is important; and he must be made to realize that he must make choices regarding his educational and vocational plans, and decisions that relate to his relationships with others. This is the task of the school counselor in cooperation with parents and other members of the school staff.

The role of the school counselor has been extensively researched. Dr. Kenneth B. Hoyt, Professor of Education, University of Iowa, indicates that a counselor's tasks include:

1. Helping each individual to see himself as the worthy and worthwhile person that he is.
2. Helping each student experience success in his own eyes.
3. Helping each student find ways that school can make sense to him.
4. Helping each student consider and make decisions regarding the values of a work oriented society.
5. Helping each student develop an understanding and appreciation of his own talents and interests.
6. Helping each student make choices from the widest possible range of alternatives which can be made available to him.
7. Helping each student formulate plans for implementing the choices and decisions he has made.
8. Helping each student accept some personal responsibility for his own destiny--of making meaningful to every student that what happens to him is, at least in part, a function of what he does or fails to do.

Two approaches used by most school counselors are individual counseling and group guidance. Group methods are not planned to replace the individual interview; rather, they are designed to complement this type of counseling. Group guidance and individual counseling should complement each other in meeting student needs. Some major advantages of group guidance are that this approach:

1. Saves time. There is no reason to repeat over and over on an individual basis information which is of a general nature.
2. Builds rapport between students and counselor. Many students feel more at ease when they know the counselor.
3. Provides background information that may improve counseling. The counselor is aware of the extent of the information covered in a group setting.
4. Has therapeutic values. It is comforting to many students to know that others share their same concern.
5. Provides some information more effectively. This is particularly true with the number of audio-visuals currently available in the orientation to work, to college, and the areas of personal concern.

6. Provides the basis for individual contacts. It can be expected that group guidance will create a demand for increased individual counseling.

7. Assures guidance time for "normal" students. Often when there is not group guidance, a counselor s time is usurped by "problem" students who are in need of remedial attention, thus leaving very little time for anyone else.

Research has shown that most high school graduates and school drop-outs secure their first employment within a radius of twenty-five miles from their home. A recommended practice for the school counselor is to be on a first name calling basis with the personnel directors in businesses located within the same geographical areas. The counselor should know the business or industry which employs the largest number of graduates and drop-outs; the business or industry which is the largest employer in the community; and the business or industry which is the choice of the largest number of students who will be seeking employment in the near future. Field trips to these places of employment should be promoted so that the students will have a chance to "see, hear, smell, and feel the environment." A field trip comes the closest to perfect teaching which has been defined as "everybody learns, everybody enjoys it, and nobody feels overworked."

If guidance is to function in an area school community, support and cooperation is needed by school boards, school administrators, teaching staffs, and the school constituency in the participating districts. The role of the guidance staff in the area school becomes one of implementation. It is necessary to work with the counseling staffs in the member high schools to develop and disseminate information regarding the different vocational area offerings which are to be provided. There is also the necessity and the opportunity to share in the development of criteria which are used for the placement of students in the various vocational programs. It is reported that counseling with students who have committed themselves to the learning of a vocational skill and who may be confronted with obstacles with which they are unable to cope may introduce other dimensions to the type of counseling which must be available.

In an area school it is essential for the cooperating counseling staffs to develop and share information which will assist young people to understand the nature of vocational skills in which they may have expressed an interest. In joint meetings or through publications counselors in the feeder schools need to receive information regarding any new course offerings or changes in courses at the area school. Orientation materials for use with eighth and ninth graders must be developed to assist these future enrollees to make appropriate and realistic choices.

A current concern of school counselors is their dilemma in being unable to predict with greater accuracy the chance a student might have for success in his vocational area of interest. The very fact, however, that choices are available and are being made does force the counselor and every student to establish some kind of dialogue in order that choices can be made. This calls on the counselor to utilize his best professional training for few of the students in an area school are planning to enroll immediately upon graduation in a four-year college program with which all counselors have first-hand knowledge and experience as a result of their own professional training.

Evidence of counselor effectiveness was revealed in a 1967 survey of 927 students from seventeen feeder schools who were then attending Penta County Joint Vocational School. In the survey these students rated the counselor as the person most helpful in influencing their decision to attend the school. The information was obtained from a survey questionnaire in which the students were asked to indicate from the names of seventeen professionals, friends, relatives, or acquaintances those who had been most helpful in influencing their decision to attend the Penta County Joint Vocational School. These seventeen individuals were identified on the survey form in the following sequence: superintendent, principal, mother, father, teacher, counselor, minister, businessman, guest speaker, brother, sister, youth leader, uncle, aunt, myself, friends, and students. No limit was established on the number of responses that could be made by each student. As a result, a total of 2,383 responses were indicated by the 927 students who were then enrolled in the school. Nine hundred twenty-seven students gave the most favorable responses to counselors (573). This was followed by mother with 506 responses, father with 432, teacher with 205, and principal with 118. All other individuals received fewer than 100 responses.

Penta County Joint Vocational School district is composed of seventeen school districts from Wood, Lucas, Sandusky, Fulton, and Ottawa counties. It covers 1,400 square miles. The school was then in its second year of operation and enrolled 927 students with the distribution indicated in the following 24 vocational preparation areas: account clerk, 31; agricultural mechanics, 32; auto body, 33; auto mechanics, 66; carpentry, 29; child care, 23; community and home services, 26; commercial art, 28; cooperative office education, 37; cosmetology, 66; data processing, 39; dental assistant, 22; dietary aide, 10; distributive education, 46; drafting, 60; electronics, 32; high skilled stenographer, 46; horticulture, 27; machine shop, 32; occupational work experience, 138; office machines, 37; printing, 28; radio and TV repair, 14; and welding, 35.

All juniors and seniors from the member schools were eligible to attend the joint vocational school, and some freshmen and sophomores, 16 years of age or older, enrolled in the Occupational Work Experience Program. No student is graduated from the Penta County Joint Vocational School. All students receive their diplomas from their home high schools. Penta provides each student, completing the training with a vocational certificate, plus a transcript indicating his vocational competency. The home school supplies the extra-curricular program. Students who attend Penta during the day return to their home school in time to participate in glee club, band, and the athletic program. A breakdown of the 927 students by grade and sex indicated that there were 277 senior boys, 161 senior girls, 298 junior boys and 191 junior girls in attendance at the time of the survey.

In summarizing responses to other survey items by the 927 students it was revealed that 91.4 percent believed that they were successful in school at Penta; 93.1 percent believed that they were learning useful information at Penta; 79.9 percent found most of their subjects to be interesting; 88.9 percent liked going to school at Penta; 14.0 percent would rather have been going to their home high school; 81.4 percent thought that their plans to attend Penta had been carefully thought out; 85.8 percent were making plans then for what they would do when they completed high school; 87.1 percent believed that much of their school work at Penta was going to be of value in achieving a future occupation; 54.0 percent knew for sure what they wanted to do for a life work; 25.0 percent had made definite plans for further education after high school; 34.4 percent belonged to the school club that was related to their program; 84.8 percent were continuing in the same program in which they started; 10.9 percent were thinking about changing the program in which they were presently enrolled; and 38.4 percent participated in home school activities.

According to these findings, it clearly indicated that most students attending Penta County Joint Vocational School at that time were satisfied with the training they were receiving, and that it was meeting their needs, for only 14.0 percent would rather have been attending their home high school. A realistic conclusion from this survey is that with the help of the counselor, students who attended Penta County Joint Vocational School in 1967 were able to develop appropriate insights into their own interests and abilities and, in addition, had made adaptations of these to the vocational training opportunities which were available to them. Another revealing aspect of the survey was that the students indicated that a major contribution of Penta County Joint Vocational School was the provision of laboratory experience that combined theory and practice.

A common fallacy among many individuals is that "students cannot enroll in vocational training programs in high school because of college entrance requirements." It was found in a recent study of college requirements in Ohio's 54 four-year degree-granting institutions that students will meet the entrance requirements in 23 of them if they have pursued the college preparatory curriculum during the 9th and 10th grades. During these years they would have completed English (2 units), Algebra (1 unit), Geometry (1 unit), Science or Biology (1 unit), Biology or Chemistry (1 unit), Foreign Language (2 units), Health and Physical Education (1 unit in 2 years), and Social Studies (1 unit).

Students successfully completing the foregoing courses during their 9th and 10th years and completing English IV in summer school can meet the requirements of 45 colleges and universities in Ohio. This leaves 9 colleges and universities in Ohio for which the students would not meet the entrance requirements. This study supports the research conducted by Dr. Collins Burnett at The Ohio State University and summarized in a publication entitled, "Studies Dealing With The Relationship Between a Prescribed Pattern of High School Units for Entrance Requirements and Academic Success in College," in which it was reported that there is little or no significant relationship between specific patterns of high school units and academic success in college.

It has long been a premise that schools exist for the benefit of the students. It is also known that employers are seeking answers to the question, "What can you do?" from all who are seeking employment. Doesn't it seem reasonable, therefore, to consider seriously some of our present school curricular requirements and ask such questions as the following:

1. If a student has the scholastic potential, why shouldn't he be permitted to enroll in available high school courses which he believes will be most beneficial to him?
2. Is there anything wrong for a student to meet the basic college requirements and at the same time to take courses to develop the necessary skills to accept employment?
3. If college entrance is uncertain, isn't it better to have a choice of action available at the time of graduation which will not leave the student dependent upon immediate additional training before being qualified to accept employment?
4. Isn't it exercising good judgment to encourage all high school students to develop a marketable skill?
5. What evidence is there to justify limiting and frustrating a student with an either/or situation?
6. Isn t it true that "we learn by doing?" And isn't it also true that there is an adaptness and enthusiasm present for youth to learn new things or to learn more approaches to already existing methods of operation?
7. Isn't it true that preparation wins and that individuals do what they are prepared to do?

These seven questions are being asked to provoke discussion and to challenge justification for the curricular requirements in many of our schools across the nation. Can it be proven that it is better for students to elect a specific college preparatory, vocational, business education, or general course, or is it better to let each student select from all four curricular areas those courses which he believes will provide the education best suited to meet his present individual needs?

A good guidance program takes counselors, administrators, vocational educators and other staff members who are willing to consider carefully the answers to these and related questions which will benefit each student enrolled in our schools. Most students are anxious for expanded opportunities to learn. Students surveyed have told us that they desire an opportunity to enroll in both academic college preparatory, and practical courses which will enable them to secure a job. Why don't we grant them their wish?

REPORT OF TASK FORCE

The task force identified the following two major problems to guide discussion:

1. Lack of coordination between vocational education personnel and guidance personnel.

2. The dissemination of information about vocational education and occupational opportunities to students, school administrators, parents, and faculty.

The task force submits the following major recommendations:

1. Encourage a unit on guidance in undergraduate teacher education programs. This could be accomplished through a special course on guidance, through a specialized unit on guidance in some other course, or through having the prospective teacher spend time with guidance personnel in a school.

2. Encourage states to establish certification standards for guidance personnel which include practical work experience, a course on occupational information, and practical experience under supervision.

3. Keep counselors informed about occupational opportunities and vocational education programs. This could be accomplished through workshops for guidance personnel, the furnishing by state departments of education to guidance personnel and local schools information about vocational and technical education programs available and information about employment opportunities, the use of local personnel from business and industry to explain employment opportunities, inviting counselors to visit vocational education programs, and encouraging employment during the summer of counselors in business and industry.

5. Encourage guidance personnel to work with vocational educators in assisting in the job placement and follow-up of students who are not pursuing further education beyond the high school.

6. Employment of qualified counselors at the junior high and elementary school level to introduce students to the world of work, orient students to vocational education opportunities, encourage and coordinate field trips to business and industry, and utilize community and staff resources to aid students in developing a better understanding of career opportunities in business and industry.

FACILITIES AND EQUIPMENT FOR AGRICULTURE IN AREA VOCATIONAL EDUCATION CENTERS

Summary*

Facilities and equipment should be provided which contribute to the attainment of the objectives of the instructional program. Whether in agricultural mechanics, ornamental horticulture, or other instructional areas, equipment and facilities should be selected according to the needs of the program and should be typical of that used in actual employment situations. Advisory committees should be utilized to make recommendations relative to the equipment and facilities most appropriate for instructional programs in area centers.

Most equipment for instructional programs in area centers is very expensive and highly specialized. Variety and quality are important. Equipment at area centers should not merely duplicate that found in local participating schools. During planning of area programs and facilities, provisions should be made for modification or replacement of obsolete equipment.

If the instructional program is to be effective, facilities should be provided as an integral part of each specialized area of instruction. Instructional relationships of space should be considered and the building site should be arranged and developed to provide for future growth, expansion, or modification as the need arises for revised and different programs in agricultural occupations.

FACILITIES AND EQUIPMENT ESSENTIAL TO SUCCESSFUL AGRICULTURAL PROGRAMS IN AREA SCHOOLS

C. M. Lawrence
Director, Agricultural Education
State Department of Education
Tallahassee, Florida

If I am to communicate with you today regarding facilities and equipment for area vocational schools, we must have a common understanding of what we mean by the term Area Vocational School. According to the Vocational Education Act of 1963, an area vocational school can be:

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*A summary of seminar sessions relating to this topic. Presentations pertaining to the topic and task force recommendations follow this summary statement.

... A specialized high school used exclusively or principally for the provision of vocational education to persons who are available for full-time study in preparation for entering the labor market, or

... The department of a high school exclusively or principally used for providing vocational education in no less than five different occupational fields to persons who are available for full-time study in preparation for entering the labor market, or

... A technical or vocational school used exclusively or principally for the provision of vocational education to persons who have completed or left high school and who are available for full-time study in preparation for entering the labor market, or

... The department or division of a junior college or community college or university which provides vocational education in no less than five different occupational fields, under the supervision of the State Board, leading to immediate employment but not leading to a baccalaureate degree.

In Florida, we have designated as area vocational schools:

... One specialized high school serving secondary and adult students

... One department of a comprehensive high school serving secondary and adult students

... Twenty specialized vocational-technical schools serving secondary, post-secondary and adult students

... Twelve divisions of a junior college serving secondary, post-secondary and adult students

In the above schools, we are offering programs in the areas of:

... Agricultural Mechanics
... Ornamental Horticulture
... Turf Grass Management
... Citrus Culture
... Forest Ranger
... Timber Harvesting Technology
... Park Management
... Forestry Mechanics

Characteristics of Facilities

The physical plant must be adequate for efficient conduct of the educational program in accordance with the objectives. Provisions for facilities would be affected by the philosophy existent on the campus, the type of institution, type of agriculture in the area, climatic conditions, and the plan for the overall development of the campus.

In planning, consideration must be given to the adequacy, effectiveness, maintenance, location and types of buildings and should include provisions for classrooms, laboratories, staff offices, resource center or library, student services, parking facilities, recreation area, health and safety facilities, dormitories if needed, and specialized laboratories, such as school farm, greenhouses, forests, and food processing facilities.

Most programs for agricultural education in area schools will require extensive and highly specialized laboratories and equipment. These laboratories and equipment must meet high standards of quality since the objectives and the strengths of area school programs lie in providing valid laboratory experiences which are basic in nature, broad in variety, and intensive in practical experiences. Well-equipped laboratories with sufficient equipment for all students to perform the laboratory work are required for specialized courses.

Laboratory equipment is a major element of cost of all programs in area schools. Variety and quality of equipment are more important than quantity of equipment. Equipment for specialized programs should be selected by the teacher or teachers who will head the program and teach it. When specifying and selecting laboratory equipment, the need for each item should be well established. It is essential that all equipment be typical of that used in employment situations. This is necessary if the student's learning experiences are to be meaningful when he is placed in a job.

It should be remembered that expensive equipment may not always be required. Many significant experiences and experiments can be performed and learned with relatively inexpensive equipment.

In addition to providing the initial equipment, it is also necessary to have an annual equipment and supply budget. These funds are necessary to replace or repair equipment and to purchase new equipment to meet modifications and changes in the program. No program can meet its educational objectives with obsolete laboratory equipment.

Setting Required for Teaching Vocational-Technical Agriculture

Recently in Florida we saw the need for developing a comprehensive bulletin of guidelines for preparing educational specifications for agricultural education programs. In this bulletin, we found that several conditions and activities inherent in the teaching-learning process will affect the design of the physical plant for programs of vocational agriculture. These are:[1]

... The problem-solving approach will very often be utilized in the teaching-learning process. Consequently, small group planning and study sessions will take place where students will need to spread their work out for greater effectiveness in addition to instructional activities involving the entire class as one group.

... Demonstrations in the classroom, agricultural mechanics shop, horticultural patio, and in the land laboratory will need to be given to small as well as to large groups.

... On some occasions, it will be desirable to schedule two or more classes together at the same time at the same teaching station for instruction by one or more teachers. To develop effective leadership abilities, both small and large group activities will be necessary. The basic teaching load for one class utilizing one teaching station per instructional period should be 20 students per teacher. The number of students involved in small group instruction may vary from three to seven. Large group instruction would normally involve two classes or 40 students. For certain leadership activities and other occasions, it may be necessary to assemble all those enrolled in vocational agriculture at one time into one group totaling 80 or more individuals.

... Different levels of attainment will be expected of students for different phases of instruction. Involved will be the development of knowledge, appreciations, understandings, abilities, attitudes, and ideals which will lead to vocational preparation. Consequently, teaching-learning activities will involve both the learning of basic principles as well as the application of principles in practice.

... The learning of students in the classroom, agricultural mechanics shop and land laboratory is most effective when supplies, hand tools, and small equipment are stored close to the area in which learning activities are to take place.

... Instructional programs will be developed for different groups of students wanting instruction at different times during the day and evening, and involving different blocks of class time. Departmental facilities will be made available to agricultural agencies in the community for educational purposes.

... Flexible and/or modular class scheduling possibly could result in daily changes in levels of student attendance at the agricultural center; and during larger blocks of time, students may be assembled in two or more teaching stations in the agricultural center necessitating a smooth student traffic flow. It is possible that several levels of instruction involving several areas of subject matter will be conducted at the agricultural center at the same time.

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[1] Guidelines for Preparing Educational Specifications for Agricultural Education, State Department of Education, Tallahassee, Florida, May, 1968.

... Supervised occupational experience programs are required as an integral part of programs of vocational-technical agriculture. These experiences may be provided at the students' home farm, the school farm, the school's agricultural mechanics shop, and/or training stations in commercial farms and ranches or related business and industrial concerns. Provision should be made for teacher-pupil conference areas and for facilities for specific individual study.

... Due to the flexible nature of class scheduling, the various levels of instruction offered, and wide scope of subject matter covered in teaching, a heavy flow of traffic among different areas of the agricultural center will be commonplace. For example, common activities in ornamental horticulture would include propagation, fertilization, selection of media, potting, and other plant science skills in the horticultural patio; demonstrations and group instruction in the classroom; individual study and research in the resource center; and woodworking, small gas engine maintenance, electrical, and plumbing work in the general agricultural shop.

Activities in the Various Instructional Areas

... Activities in the classrooms will include large and small group instruction, individual study and/or research, demonstrations, class discussion, work-study sessions, laboratory exercises, lectures, student presentations, and the use of varied audio-visual media.

... Activities in the resource center will include supervised group and individual study and research, individual and group conferences and discussions, and the preparation and use of audio-visual materials with a wide variety of teaching-learning resources available--such as slides, film strips, transparencies, specimens, reference books, bulletins and charts.

... Office activities in which the teacher or teachers will be engaged include planning and preparing for teaching; developing course and unit outlines, lesson plans, instructional materials, and evaluation instruments; counseling students; supervising students; experiences in the acquisition of new operative and managerial abilities at school and on-the-farm or placement location; preparing reports and maintaining records; planning for and participating in general and departmental faculty meetings and other individual or group activities designed for the purpose of improving instruction. Secretarial services will be necessary and should be housed in this area.

... Activities in the general agriculture shop will include woodworking, painting, tool conditioning, cold metal work, pipework, soldering, sheet metal work, arc and acetylene welding, plumbing, concrete and masonry work, electrification, hot metal work, small engine maintenance and repair, and project repair or construction.

... Activities in the agricultural mechanics laboratory and related patio and/or work areas will include maintenance, repair, overhaul, calibration, cleaning, testing, painting, and set-up of farm power equipment and machinery. Extensive instruction in arc and oxy-acetylene welding will also take place.

... Activities in the horticultural patio will include mist propagation, media selection, storage, mixing, sterilization, potting, plant culture, and retail sales.

... Activities on the land laboratory could include such activities as crop and grove cultural demonstrations; fertilizer, insecticide, herbicide, and fungicide applications; small and large livestock care and handling; planting, transplanting, grafting, pruning, propagating, and other nursery or landscaping operations.

Relationships of Instructional Spaces Within the Agricultural Complex

The schematic drawing (Figure 1) is intended to depict the relationships of different instructional spaces within the agricultural complex to each other. Consequently, major traffic patterns to be considered are easily seen. The figure is not drawn to scale.

The time spent by students and instructors within these various instructional spaces will vary according to the type of programs provided. To assist in planning, Table I has been developed as a guide to the relative use of time in these different instructional spaces within the physical plant for the different areas of instruction provided in various programs of vocational agriculture.

To be effective and efficient, the classrooms, resource center, office, storage areas, agricultural shops, patios, and horticultural facilities for teaching vocational-technical agriculture should be designed as an integral unit. A separate complex designed and constructed for the sole purpose of teaching vocational-technical agriculture is an ideal type of plant.

The building site should be close enough to the other school buildings so that students can get to their other classes without undue delay. It should be adjacent to a parking area, or better, a parking area should be provided in connection with the building. Natural or artificial screening of outside patio and work areas should be provided to create a pleasing setting for departmental activities.

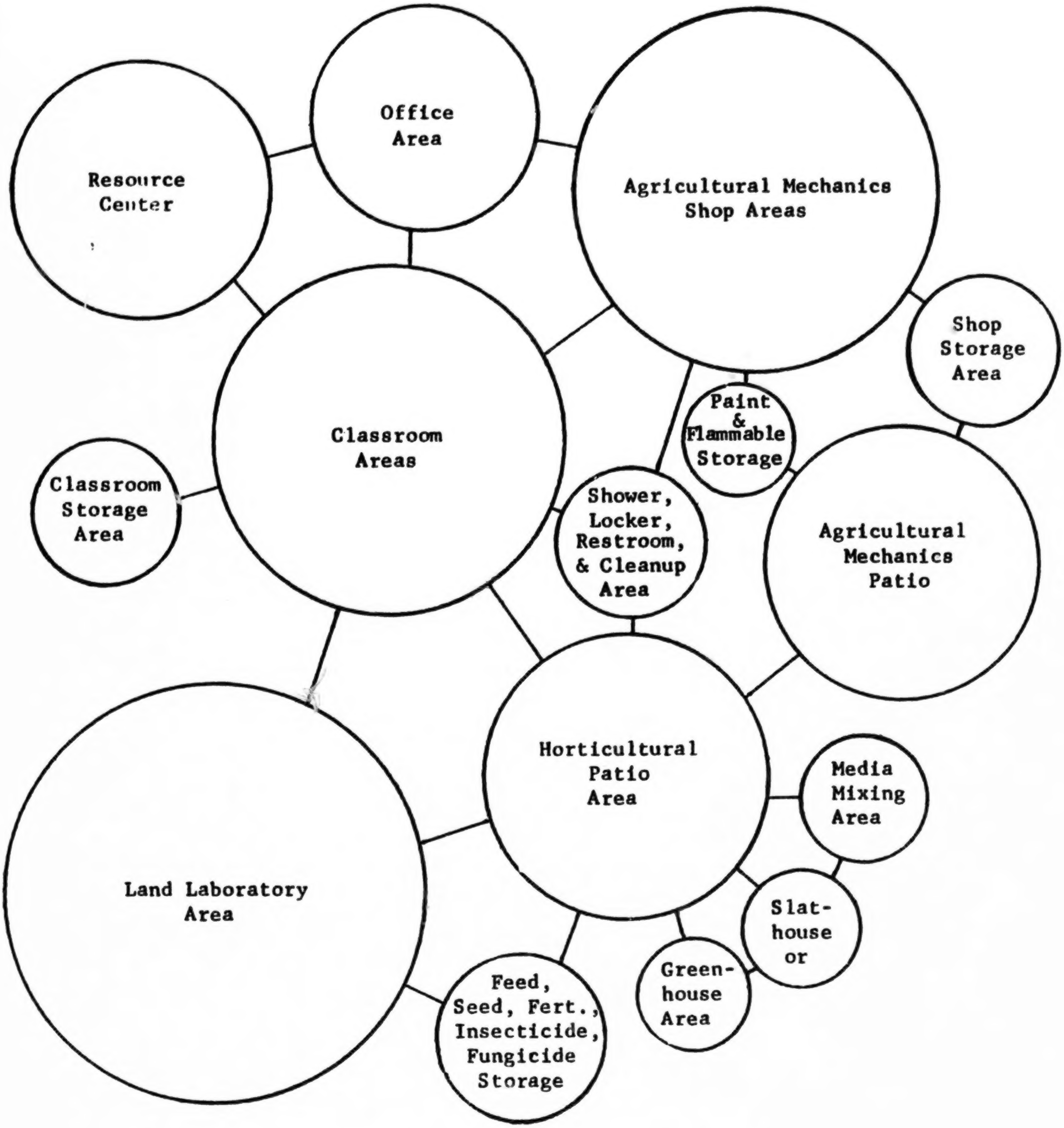
Office
Area
Resource
Center
Agricultural Mechanics
Shop Areas
Shop
Storage
Area
Paint
&
Flammable
Storage
Classroom
Areas
Classroom
Storage
Area
Shower,
Locker,
Restroom,
& Cleanup
Area
Agricultural
Mechanics
Patio
Horticultural
Patio
Area
Media
Mixing
Area
Land Laboratory
Area
Slat-
house
or
Green-
house
Area
Feed,
Seed, Fert.,
Insecticide,
Fungicide
Storage

Figure 1. Relationships of Instructional Space Within the Agricultural Complex.

TABLE I

Guide to the Relative Use of Time in Different Instructional Spaces with the Physical Plant for Different Areas of Instruction in the Program of Vocational Agriculture

Area of Instructional Preparation	DIFFERENT INSTRUCTIONAL SPACES					
	Classroom	General Agriculture Shop	Agricultural Mechanics Laboratory & Patio	Resource Center	Land Laboratory	Special Instructional Facilities
	D B P A T	D B P A T	D B P A T	D B P A T	D B P A T	D B P A T
Agricultural Production	L E E E E	M M M M M	L L E E E	L M M M E	E M E L L	
Agricultural Supplies	M L M M L	L - L L L	L L L L L	L - E E L	L L L L L	
Agricultural Mechanics	L M M M M	E M E E M	M M E E E	L L M E E	M L M L L	
Agricultural Products	M L M M L	L - L L L	L L L L L	L - M M L	L L L L L	E L E L L
Ornamental Horticulture	M L M M M	M L M M L	L L M M M	L - E E E	E E E E E	E E E M E (Horticulture Patio)
Agricultural Resources	M L E M L	L L L L L	L L L L L	L - M E E	M L M M L	
Forestry	L L E M M	L - L L L	L L M L L	L - M E E	E L M M E	
Professional Agriculture	- L E E E	- L L L L	- L L L L	- M E E E	- M M M M	

Key: I. Amount of Time Space is Used

E - Extensive

M - Medium

L - Limited

II. Programs Served in each Instructional Space

D - Disadvantaged - Persons with Special Needs
B - Basic Agriculture I and II
P - Advanced Secondary and Post Secondary
A - Adult and Young Farmer
T - Technical

It is desirable that the department of vocational-technical agriculture have a basic land laboratory suitable for teaching purposes adjacent to or near the agricultural center. Available acreage near the school plant is usually quite limited, but through long-range planning, school officials can often acquire necessary land for the department within reasonable transporting distance of the school or center.

It is essential that certain services and types of utilities be provided for agricultural facilities in area vocational schools. Utilities will include electricity, adequate lighting, water, proper drainage, proper ventilation, heating, cooling and humidity control. Service and access areas should include a hard-surfaced drive leading to the parking, patio and shop area for delivery service and other traffic. There are certain environmental factors that should be considered such as color dynamics, noise, outside views, and orientation to the sun.

Summary

In summarizing, I am going to provide for your viewing some colored slides of typical area school facilities. As you would expect, some of these facilities are exceptionally well planned and excellent for housing instructional programs while others are very inadequate.

As we view the slides, let me recall with you some important statements which were made regarding facilities and equipment for area vocational schools:

... The physical plant must be adequate to conduct an instructional program in accordance with the objectives.

... Programs for agricultural education require extensive and highly specialized facilities and equipment.

... Facilities and equipment for area vocational schools are very expensive.

... Equipment should be typical of that used in employment situations.

... Provisions must be made for replacing obsolete equipment with new equipment to meet modifications and changes in the program.

... Certain conditions and activities inherent in the teaching-learning process will affect the design of the physical plant.

... Relationships of instructional spaces within the total complex should be considered in developing the physical plant.

REPORT OF TASK FORCE

The task force set out to develop guidelines to accomplish the following objective: to provide facilities and equipment which will make available the best possible training for students in meeting their vocational goals in agricultural occupations. The guidelines are based on the assumption that studies and surveys have been made and that instructional programs to be offered have been determined prior to the planning for needed facilities and equipment.

The task force developed the following guidelines:

1. Facilities and equipment should be provided which will meet the basic objectives of the instructional program for each of the following areas: production agriculture, agricultural mechanics, agricultural supplies, agricultural products, ornamental horticulture, forestry, and agricultural resources.

2. Advisory committees should be selected to make recommendations for facilities and equipment.

3. In planning for facilities and equipment, consideration should be given to the adequacy, effectiveness, maintenance, location, and types of buildings. Provisions should be made for classrooms, laboratories, staff offices, resource centers or libraries, student services, parking facilities, recreation areas, health and safety facilities, dormitories if needed, and specialized laboratories such as school farms, greenhouses, forests, and food processing facilities.

4. To be effective and efficient the classrooms, resource centers, offices, storage areas, agricultural laboratories, horticultural facilities, and other specialized laboratories should be designed as an integral unit.

5. The site should be so arranged and developed to provide for future expansion and growth.

6. Equipment should be typical of that used in the industry.

7. Building and room flexibility should be used when it is more practical or feasible than to provide specific facilities in a school plant.

8. Adequate financing must be provided for the facilities and equipment to meet the objectives of the program.

9. The state supervisory and teacher education staffs should prepare recommended lists of approved equipment for each instructional area.

10. Provision should be made to keep equipment up-to-date.

11. Consideration should be given to the possibility of purchasing cooperatively or leasing high cost equipment.

12. Schools should cooperate in sharing facilities whenever feasible.

The task force identified the following areas for which research is needed:

1. The feasibility of leasing or purchasing specific items of equipment.

2. Methods of financing vocational education centers.

3. The extent industry participates or will participate in equipping area vocational centers.

4. The safety and health standards which apply to facilities and equipment needed in area centers.

SELECTION OF PERSONNEL FOR AGRICULTURAL OCCUPATIONS PROGRAMS IN AREA VOCATIONAL CENTERS

Summary*

During the current period of expansion of agricultural occupations programs in area vocational education centers, the availability of qualified teachers in specialized instructional areas is very limited. The temporary certification standards adopted to relieve this shortage should not be extended indefinitely.

There are several sources for obtaining qualified and competent teachers, supervisors, and administrators for agricultural occupations programs in area centers. These sources of personnel are:

1. Successful teachers of vocational agriculture who have demonstrated an interest and specialization in an instructional area of agriculture.

2. Personnel who have been technically and practically prepared in specialized areas and are willing to obtain the in-service education needed to become professional teachers.

3. Revised undergraduate programs of teacher education which permit the preparation of teachers in the specialized fields.

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*A summary of seminar sessions relating to this topic. Presentations pertaining to the topic and task force recommendations follow this summary statement.

Each of these sources has advantages and disadvantages. Regardless of the source of personnel, constant in-service education, periodic leaves of absence for educational purposes, placement of teachers for occupational experience in business and industry (especially during the summer), and assistance to teachers in curriculum development, instructional materials, and methods of teaching should be used to improve the quality of instruction in agricultural occupations programs in area vocational centers.

PROVIDING FACULTY FOR AGRICULTURAL EDUCATION IN AREA CENTERS

Ralph E. Bender
Professor and Chairman, Department of Agricultural Education
The Ohio State University
Columbus, Ohio

One of the most important factors in determining the success of any educational program is the quality of the teaching. If the teaching is effective, desired behavioral changes will be developed in the students. Such behavioral changes will meet the demands of the students placed in work positions and/or meet their needs in a program of continuing education. Most of us believe that programs at the high school level should not be terminal in nature.

The work of the teacher is that of directing the learning process. The student who has learned will think, feel, and act differently. The teacher (more than anyone else) has the responsibility for making decisions concerning what to teach, when to teach, and how to teach.

Even though we have learned much about teaching and learning, it is difficult to select persons for teaching and to be able to predict teaching success. There is no sure method or set of criteria to follow. We generally agree, however, that the present-day teacher needs many competencies. They are multi-dimensional in nature rather than only the competency to teach a class in a certain subject matter area. This is particularly true of teachers in vocational education in agriculture.

Dr. Kimball Wiles, Dean, College of Education, University of Florida, listed the competencies needed by a teacher. He was thinking primarily of teachers generally rather than specifically for vocational education. However, the list seems to be appropriate for vocational agriculture. He indicated that a teacher must have competencies such as:

1. The ability to relate to the learning of one student; this includes diagnosis and individual instruction.

2. The ability to analyze group development and interaction and perform a leadership role in a group.

3. The ability to communicate both with individuals and groups.

4. Knowledge and skill in a discipline or field. This knowledge should be deep enough to enable the teacher to approach the field from a number of different angles and to inquire into dimensions that he has not hitherto explored.

5. The ability to structure and restructure knowledge. This competency will enable the teacher to choose from his specialization the type of knowledge that is important to a given individual and to restructure it so that the individual or group may investigate the knowledge in terms of its own motivation.

It may be almost impossible to get all of these competencies to the degree desired in each person selected. Perhaps the answer to our problem is through the selection of a faculty of teachers of agriculture who together would generally meet such needs. For example, if in a program of agricultural mechanics you selected a person who has had specialized training and experience in that field but not much, if any, training in the area of teaching methodology and procedures, he could be teamed with a person who has particular competence in individual and group teaching methods. It is reasonable to believe that the agriculture faculty should learn from each other through a program of in-service education among themselves as well as taking advantage of that which is provided through professional leadership at the local, area, and state levels.

There is no one best source for getting teaching personnel for the area vocational centers. Perhaps the following are among our best possibilities:

1. Successful teachers of vocational agriculture who have demonstrated an area of interest and competency in the specialized program that is being taught. The advantage of such persons is that they have a concept of vocational education as a part of the total school program. They realize that vocational education requires an integration of the theoretical with the practical. They have experienced and appreciated such important techniques as occupational experience, individual instruction, classroom and laboratory methods, the value of the FFA, and an appreciation of the other aspects of the school program that contribute to the development of a well-qualified person. Perhaps a teacher of vocational agriculture who left such work to take a position in some agri-business or industry would even be still better qualified than the regular teacher of vocational agriculture who may for the most part lack the practical experience in the field of endeavor.

2. Another source for personnel is to recruit from those who have been technically and practically prepared in the field. There are, for example, a number of horticultural graduates who are currently engaged

in the business of horticulture who enjoy working with people and willing to accept the challenge of teaching. Salaries in many schools are beginning to get to the point where they provide favorable competition. These people, of course, need a program of in-service education that gives primary emphasis to the professional aspect of teaching.

3. Another source for meeting our need is through a revised undergraduate program of teacher preparation. Most of our departments of agricultural education now have the needed flexibility to permit a prospective teacher to take a sufficient amount of technical work to be prepared in the specialized field. For example, in our department we have had for a number of years a combined horticulture-agricultural education four-year program in which the student may take as many as 50 hours of horticulture and be certified as a teacher. This same kind of program can be developed with any agricultural area where teachers are needed. The difficulty thus far has been that we do not know the demands for such persons. Therefore, students are somewhat hesitant in engaging in a program where the demands are not as great as those with a more generalized program.

As we pursue such programs, it is necessary for us to provide for some periods of practical experience. The nature of the work may imply that a student should be engaged in the business or the industry during part of the academic year rather than being in school. This kind of experience should be planned and supervised so it is educationally significant.

REPORT OF TASK FORCE

The major recommendations of the task force are:

1. Administrative and supervisory personnel: Administrative and supervisory personnel should have a background of successful teaching in vocational education. We believe that to administer effectively a vocational program, successful vocational teaching experience is necessary.

2. Head teacher, department head, or supervisor: The department head or supervisor of the agricultural occupations program in an area vocational center should be a graduate in agricultural education from an approved teacher education institution. He should have successful vocational agriculture teaching experience during which he demonstrated strong leadership and organizational ability. He will preferably have completed the Master's degree.

3. Instructors: Instructors should have successful teaching experience plus a minimum of one year successful occupational experience in the instructional area taught. Instructors should have a degree in agricultural education. There should be provisions for approval of temporary certification by

the State Department of Education on an annual renewal basis in times whe there is a shortage of personnel. Some types of instructors who may be granted temporary certification include: (a) persons with a degree in an aea of specialization plus successful occupational experience, (b) persons with some formal college education with successful occupational experience in the area taught, (c) persons with no college training but with many years o highly successful occupational experience in the area taught, and (d) persons with a college degree in the area of specialization taught. Provisionally certified teachers should be under the direct supervision of and receive assistance from a qualified vocational supervisor at the local level

PROVIDING OCCUPATIONAL EXPERIENCE FOR AGRICULTURAL OCCUPATIONS PROGRAMS IN AREA VOCATIONAL CENTERS

Summary*

Occupational experience is a vital part of an instructional program preparing individuals for employment in agricultural occupations. The occupational experience should relate directly to the occupational objectives of students and should be provided for all students. The nature, amount, and complexity of occupational experience will vary with the instructional program and occupations involved and with personnel and facilities available.

Whether the student desires experience in production agriculture or in an off-farm occupation, occupational experience as a part of the instructional program should contribute to the attainment of the following objectives:

1. Preparation for employment in an agricultural occupation.
2. Development of specific understandings, abilities and skills necessary for successful employment and advancement.
3. Development of desirable attitudes toward work and desirable work habits.
4. Help in getting along and working efficiently with others.
5. Development of desirable personal and leadership abilities.
6. Development of long-time educational and occupational goals.

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*A summary of seminar sessions relating to this topic. Presentations pertaining to the topic and task force recommendations follow this summary statement.

Occupational experience may be provided on a farm, in a business or industry, or in a school laboratory or school farm. The type of experience programs selected by students should be closely coordinated by the teacher.

Appropriate teacher education in occupational experience is a prime factor in the success of the teacher in directing occupational experience programs. Teachers must understand how to select, organize, supervise, evaluate, and coordinate occupational experience programs. Teachers must be acquainted with the legal aspects of the program and be qualified to inform cooperating employers and students of their responsibilities and liabilities.

Evaluation of occupational experience programs is essential. Evaluation of experience programs should be shared by students, teacher coordinators, advisory committee members, and employers. Evaluation should consider the objectives of the program in relation to the outcomes and provide a basis for revising future programs to meet more effectively the needs of students and employment needs of the agricultural industry.

PROVIDING OCCUPATIONAL EXPERIENCE FOR AGRICULTURAL OCCUPATIONS

C. E. Bundy
Professor of Agricultural Education
Iowa State University
Ames, Iowa

Objectives

Occupational on-job experience is a vital part of any program preparing individuals for employment in agricultural occupations. The nature, amount, and complexity of such training will vary with the occupation involved and with the personnel and facilities available to develop skills in the area school. Most vocational-technical programs in agriculture involve instruction in general education which includes skill in mathematics, communications, and the sciences; instruction in technical agriculture; instruction in business and distributive education; and occupational experience. The emphasis given each of these areas will vary greatly among programs.

The occupational experience program should result in the attainment of the following six objectives by the trainee:

1. Prepare trainee for employment in agriculture.

2. Equip the trainee with specific competencies (understandings, abilities, skills) necessary for employment success.

3. Develop in trainee desirable attitude toward work and work habits.
4. Help trainee to get along and work efficiently with others.
5. Develop in trainee desirable personal and leadership qualities.
6. Help trainee develop long-time educational and occupational goals.

Initiating an Occupational Experience Program

In initiating an occupational experience program it is very important that the teacher-coordinator plan the program carefully in advance with administrative personnel. Such individuals need to understand well the need for the program and its relationship to other phases of post-high school instruction in agriculture. Personnel associated with other areas of vocational-technical education should be consulted. In some cases, these people can be very valuable in not only offering suggestions for the program but also in providing assistance in coordination of the program. Representatives of state and local employment services as well as key personnel in business and industry should be involved.

Most coordinators have found it very helpful to have an advisory committee appointed to assist in both the establishment and conducting of instructional programs. The committee should be composed primarily of persons representing the areas of agricultural business and industry most closely related to the instructional programs to be offered. A committee of five to nine members is usually recommended. This group can help determine the training needed by individuals for entry into the occupational field; they can establish the teaching calendar which will lead to the development of the competencies needed; they can help set up priorities concerning equipment and supplies needed; they can suggest possible employment experience centers; they can help formulate a public relations program; they can help evaluate the program; and lastly they may be very helpful in locating permanent employment for the trainee.

Lastly, it is desirable to involve trade association and union personnel whenever possible. Trade association people have been very helpful in the organization of many instructional programs. In most cases the unions have not been deeply involved in programs related to agriculture. In some cases, however, they have been very helpful.

Selection of Occupational Experience Centers

From a time input standpoint the two most important persons in the occupational experience program are the employer, or his on-job supervisor, and the student. These individuals must work together in order to provide the experiences needed by the trainee. The success or failure of the entire program may hinge on the effectiveness of the coordinator and the advisory committee in the selection of desirable occupational experience centers and on-job supervisors. The latter may be the employer or may be someone assigned by him.

With the help of the advisory committee a survey should be made of potential employers. The establishments capable of providing personnel and experiences needed should be identified. The coordinator then should visit with these potential employers and acquaint them with the program, responsibilities, and needs. The relationships between the coordinator and the employer personnel should become cordial and close. Lastly, through these visits the teacher-coordinator should determine which of the potential employers are best qualified to provide the assistance needed and which has interest and enthusiasm for the program.

Criteria for Selection of Experience Centers

Following are the criteria which have been helpful to area school personnel in the selection of desirable centers:

1. Employer is willing to cooperate.
2. Employer is interested in trainee welfare.
3. Adequate on-job supervision is available.
4. Employment will provide needed competencies.
5. Legal requirements will be met.
6. Varied experiences are available.
7. Physical facilities are adequate.
8. Safety standards will be met.
9. Employment period and schedule are suitable.
10. Personnel involved are fair, congenial, helpful and of good character.
11. Labor relations and wages are satisfactory.

Placement of Trainees

Much must be done between the time that the employment experience centers have been selected and the placement of trainees in centers. First, the coordinator and employer must identify the competencies necessary for employment and emphasize those that can be developed in the classroom and those that must be developed on the job. The person or persons best qualified to serve as on-job supervisors must be identified. These individuals must become knowledgeable concerning their responsibilities. The work activities or the job responsibilities of the trainee must be established. The length of the occupational experience period must be determined and some thought given to the allocation of time during the training period. Every effort must be made to help the employer or his representative become familiar with those situations necessary in a desirable learning situation.

The trainees must be given instruction in interview techniques. Their interest concerning type of employment desired and competencies needed must be determined.

Trainees need to gain actual practice in interviewing for a job. This can be a very valuable educational experience. The coordinator usually will try to place students where they will be most satisfied, and secondly where they will be most likely to satisfy the employer. By selecting two or three trainees for each job there is less likelihood of a person being hired who cannot satisfactorily meet the employer's expectations.

While agreements are not usually signed by employers and employees, it is recommended in employment experience programs that cooperative occupational experience agreements be signed by the employer, the trainee, and the coordinator.

Orientation and Supervision of Trainee by On-Job Supervisor

It is very important that the trainee receive special orientation to his new job. The employer or his representative and the teacher-coordinator should discuss with him in detail his employment duties. The employer should explain the regulations as related to his employment. These would include the working hours, the pay, the deductions, sick leave, insurance provisions, the dress and personal conduct of the worker, and so forth. In some states certificates concerning employment for educational purposes must be obtained. Legal requirements of the job must also be understood by the worker.

It is very important that the trainee be given specific instruction in regard to his task or tasks. The trainee should have an opportunity to observe others doing a similar job and an opportunity to raise questions. Instruction needed by the trainee in learning his new responsibilities must be provided. During the first week he will need rather close supervision.

The on-job supervisor must observe and evaluate the progress of the trainee as the employment experience program progresses. He must make certain that the work environment of the trainee provides for his best health and safety. It is very important that the supervisor show interest in the trainee as a developing technician.

Coordination by Area School Personnel

A desirable working relationship between the teacher-coordinator of the area school and the on-job supervisor is a must. These individuals must share responsibility in a high quality program of instruction for the trainee. It is important that the school personnel be very tactful in visiting both with the trainee and with the employer personnel. His discussions with employers and with the supervisors must take place at such time that they will not be inconvenient and in such a way that the time needed will not reduce their effectiveness in their place of business.

Periodic visits will be made to the centers by area school staff to observe the trainee at work. The frequency of visits will be dependent upon the nature of the occupation and the general effectiveness of both the trainee and of his supervisor.

The teacher-coordinator obtains the on-job supervisor's evaluation of the trainee and also determines the degree that the trainee is satisfied with his progress. The extent that the trainee has acquired the needed competencies is determined as is the need for providing instruction in the classroom following the on-job training period.

The coordinator also observes the working conditions in the place of business and the extent that safety and health regulations are being met. He at times may have an important function in assisting in developing good morale and working relations between the trainee and employer personnel.

Careful records of each visit are kept. These records vary greatly among teacher-coordinators but usually include in addition to the name of student and the date of visit the purposes of the visit, a summary of observations, instructional needs discovered, suggestions given the employer, and suggestions given to the trainee.

Legal Aspects of Occupational Experience Program

A number of legal questions may arise in developing occupational experience programs. It is usually best to work with the school attorney in developing the program so that all legal matters are not only understood but provided for. School personnel should be very careful to organize the program in such a manner that the employer will not be faced with legal problems.

Following is a list of legal matters which should be given attention:

1. Social Security.
2. Workmen's compensation.
3. Fair Labor Standard Act.
4. State and Federal income tax.
5. Insurance.
6. Anti-discrimination laws.
7. Licensure regulations.

8. Labor unions.

9. State and Federal governmental requirements concerning employment experience programs.

In most cases the employer is aware of the legal aspects of the program and works through his own legal representatives in making certain that all conditions are met. It is equally desirable that the teacher-coordinator do likewise in working with the school's attorney.

Evaluation of Occupational Experience Program

Careful records should be kept by both the student and the employer of the progress of the trainee. These records should involve not only a record of the time of arrival, time of leaving the business, total hours of employment, specific jobs completed, but also some measure of the quality of work done by the trainee. It is sometimes difficult to develop criteria effective in measuring quality of the product of the trainee's labor. Evaluations may be made using a number of criteria. The result-centered approach evaluates the program in terms of the extent that the purposes for which the program was established have been met. A second concept of evaluation involves the listing of the essential principles or the desired practices in conducting the program and the extent that they have been used. This sometimes is referred to as method-centered approach.

A third type of evaluation is referred to as a benefit-cost analysis approach and is concerned with the extent that the benefit of the program outweigh the inputs in terms of cost and manpower.

A combination of the three types of evaluative approaches probably is desired but because of the complexity of the problem, more elementary methods are commonly used.

The employer or his representatives should periodically rate each trainee on his interest, attitude, courtesy, cooperation, initiative, dependability, his personal appearance, and job performance. The rating on job performance may be subdivided with ratings on a number of different types of activities and jobs completed. These ratings should be discussed with the teacher-coordinator and with the student. A common practice is to have a conference between the three individuals at the time of the teacher-coordinator's visit to the center.

The teacher-coordinator should periodically rate the trainee using the same criteria used by the employer. The school representative, however, may want to place more emphasis on the extent that the trainee has acquired specific competencies than perhaps does the employer. Due to the fact that the teacher-coordinator has worked with the trainee in the classroom, he probably may be able to provide some information concerning the personal qualifications of the trainee that the employer has not been able to ascertain. On the other hand, the employer may have discovered certain characteristics of the individual that have not been observed in the classroom.

At the close of the occupational experience program, both the employer and the teacher-coordinator will usually evaluate the trainee using a more detailed and complex evaluation sheet. Many of these involve a listing of general traits and an opportunity for the evaluator to rate the individual on a five- or ten-point scale. Such traits as integrity, dependability, responsibility, initiative, judgment, cooperation, leadership, attitude toward work, emotional stability, courtesy, friendliness, personal appearance, potentiality and others may be involved.

A second part of the evaluation deals with job or employment skills. These may include mathematical ability, use of English, speaking ability, penmanship, knowledge of merchandise, salesmanship, mechanical aptitude, stock keeping ability, feed room management, house cleaning, grain receiving, and so forth.

It is very desirable that evaluative practices be used throughout the entire experience period so that any weaknesses shown in the experience program or in the competence of the trainee can be overcome before the close of the training period. The periodic ratings of the trainee and the final evaluations of the trainee are very helpful in determining the effectiveness of the on-job supervisor, the teacher-coordinator, as well as the trainee. The evaluations of the criteria involved should assist in the improvement of the program.

The total occupational experience program may also be evaluated by the teacher-coordinator, the members of the advisory committee, the employers, the school administration, members of trade organizations, and by the trainees. The total program can perhaps best be evaluated in terms of the three approaches described earlier--the result-centered approach, the method-centered approach, and the benefit-cost analysis approach.

The best evaluation of the program, however, must be delayed until the trainees have been placed in employment situations and have been given an opportunity to prove their worth. Many programs have not been operating for a sufficient time to provide information concerning the effectiveness of those who have completed the employment experience program. Teacher-coordinators should be encouraged to follow-up each of the graduates and determine during the first and second years of their employment the extent that they have been successful and obtain from them suggestions for the improvement of the program.

The occupational experience program will vary in length with the type of occupation involved. Some area schools are able to provide considerable instruction in the classroom which cannot be provided in some other centers. The actual number of hours of employment experience may vary from 200 to 2,000 hours. No part of the total post-high school instructional program in agriculture deserves more attention than does the occupational experience program. This part of the program probably has the potential to return more benefit per input in terms of either dollars or instructor time than any other phase of the total instructional program. It is rated high both by trainees and by employers. It is hoped that the guidelines presented will be of help to persons assuming responsibility for this very important phase of agricultural education in the area vocational-technical school.

REPORT OF TASK FORCE

The major recommendations and guidelines developed by the task force for providing occupational experience in agricultural occupations programs in area centers are as follows:

1. Legal responsibilities: The vocational agriculture teacher should be acquainted with federal and state labor laws. All students participating in occupational experience programs should be covered by liability insurance. Teachers are urged to hold membership in professional organizations which provide liability insurance.

2. Teacher education: Prospective teachers should be taught how to organize and conduct occupational experience programs. Both prospective and present teachers and vocational coordinators should be provided opportunities to obtain occupational experience through summer employment. Requirements for supervised occupational experience programs in post-secondary schools should include two years of successful occupational experience. Opportunities should be provided teacher educators and supervisors for gaining understandings about occupational experience programs.

3. Types of occupational experience programs: Occupational experience related to the student's objective should be provided for all students enrolled in agricultural occupations programs. In production agriculture, occupational experience can be obtained on the home farm, through farm placement, or on the school laboratory or school farm. In off-farm agricultural occupations, occupational experience should be provided by placement in an agricultural business or industry, through school laboratories, or through simulated experience. Students participating in off-farm agricultural occupations programs should be encouraged to conduct experience programs in production agriculture. A student's occupational experience program should be commensurate with his special needs and abilities.

4. Coordination and evaluation of occupational experience programs: The major responsibility for the coordination of the occupational experience program in agriculture rests with the vocational agriculture teacher or department chairman. Occupational experience programs should be coordinated with other high school vocational services and with

post-secondary institutions and with other agencies such as the employment service, labor unions, apprenticeship programs, agricultural organizations, state and federal labor departments, and business and industrial associations. Occupational experience programs should be evaluated in terms of the student's vocational objectives. Evaluation should involve students, teacher coordinators, advisory committees, employers and others involved in the program. Evaluation must be continuous and should be based on qualitative as well as quantitative data.

5. Topics for further research: Topics suggested for research are (a) effectiveness of a cooperative approach for occupational experience programs among the various vocational services, (b) simulated occupational experience in lieu of other types of occupational experience, (c) effectiveness of occupational work experience programs, (d) the amount of time students should spend in occupational experience, (e) characteristics of students participating in various types of occupational experience programs, and (f) teacher load for supervising occupational experience programs.

EVALUATION OF AGRICULTURAL OCCUPATIONS PROGRAMS IN AREA VOCATIONAL CENTERS

Summary*

Evaluation is essential to improve the effectiveness and efficiency of agricultural occupations programs in area centers. Evaluation must be continuous and must begin during the planning stages of the instructional program. Evaluation must be based on valid and reliable information and involve persons who are involved at all levels of responsibility in the instructional program.

Evaluation of agricultural occupations programs should include the following areas:

1. Supervision and administration of the program
2. Student services
3. Advisory committee activities
4. Plans for future development

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*A summary of seminar sessions relating to this topic. Presentations pertaining to the topic and task force recommendations follow this summary statement.

5. Instructional personnel

6. Physical facilities

7. Library

8. Curriculum

Advisory committees can assist in evaluating programs in area centers. Advisory committees provide a valuable service in establishing the need for programs, in planning and coordinating programs, in curriculum planning, in securing qualified faculty and other personnel, and in evaluation.

PROGRAM EVALUATION IN VOCATIONAL AGRICULTURE

Doyle Beyl
Supervisor, Vocational Agriculture
State Board of Vocational, Technical and Adult Education
Madison, Wisconsin

Provision for evaluation was written into the 1963 Vocational Act and the Essex Committee has written a report that carries weight in new legislation. They made an "accurate appraisal" and set an "official valuation" on vocational education on the national level. Evaluation plays an important role in vocational education. I feel honored to be assigned this area. While I feel honored, I also find the subject challenging.

Evaluation in vocational agriculture is not new. Probably no program has been evaluated more often or by more people than the high school vocational agriculture program. It is evaluated first by realists--those whom it serves, high school students and young and adult farmers. It is also evaluated by administrators, other instructors, and in some communities almost everyone knows whether the agriculture department is good or bad. Did they win the fat stock judging contest? or how many youth remained in agricultural occupations? often form a basis for evaluation.

Evaluation should be the local staff responsibility in view of progress toward achieving program objectives at the local level. Not only is the staff motivated by such an evaluation, local people become involved and, consequently, interested. Results of an evaluation must stimulate self-improvement to be worthwhile.

Evaluation of vocational agriculture is a large subject, so with your permission I am going to focus my remarks on the post-high school phase and probably lean more heavily toward training designed to accommodate people going into farm related occupations and toward production agriculture. Because I am not well versed on what is happening outside our state, my remarks will be centered on Wisconsin activities.

Volumes have been published on evaluating high school programs. One excellent paper presented by Dr. Byram at the Central States Seminar on Agricultural Education last February in Chicago is entitled "Guidelines for Evaluation of Local Programs of Vocational Agriculture." These guidelines dealt primarily with secondary schools and were focused on the local program. Many of the six questions asked by Dr. Byram have value in developing evaluation on the state-wide basis and on the post-secondary school level as well as the secondary school programs.

The U.S. Office of Education and most state offices have developed criteria for evaluating secondary school curriculums. I am sure you are acquainted with those which are used in your state. The June issue of The Agricultural Education Magazine was devoted to evaluation and contained Dr. Byram's paper, as well as many other excellent articles on evaluation. I suggest your reviewing that issue.

Evaluation of a post-high school program is a continuous process and must begin during the planning stages of this program. The evaluation must be valid and reliable, and because we may be planning a relatively new program, people involved in this business at management, mid-management, and employee levels must be involved as advisory committee members. In many programs the Employment Service can also be called upon to validate information. I want to illustrate this point because some of us tend to believe the Employment Service is not working in agriculture. Recently we have been meeting with the Wisconsin State Employment Service personnel to attempt the development of a program to train ex-migrants as farm laborers. We have also been working with the Employment Service to attempt development of a vocational program in landscaping designed to accommodate inner-city youth from Milwaukee.

First, interested people representing an area of agriculture are invited in and the functions of an advisory committee explained. After the initial meeting with these men, either individually or as a group, our director invites those qualified and interested to serve on an advisory committee. In some cases an association will supply names of people they believe qualified to serve and these may be appointed. This was true in the case of our Wisconsin Canners and Freezers Association appointing industry representatives.

A primary function of the advisory committee is to determine the manpower needs. These are not the total needs of that industry, but rather the needs either as technicians or vocationally trained employees. Our course in Dairy Processing was initiated in terms of expressed needs of the dairy companies responding to a questionnaire. This questionnaire was develop in part by the advisory committee.

Not all programs are state oriented. Usually they start out as state oriented programs and as success and enrollment and placement illustrated, more programs are initiated until, in some cases, they almost become locally oriented. Some are developed on the local level.

Several questions must be answered to determine the value of a proposed program.

Will the new program dilute an existing program's quality? Proposa for these programs must be evaluated as to whether an existing program' quality will be diluted and consequently fragment basic program concepts. For example, we have two existing associate degree programs in Farm Machinery Partsman and Salesman. They are designed to train people wishing for mid-management positions as department managers in large farm implement agencies or as managers or ultimate owners of smaller agencies. A very fine proposal came in which seemingly met the necessary criteria as a two-year vocational program entitled "Farm Machinery Partsman." This program will not be initiated because it is felt it would compete for the same students and through misinterpretation students would believe it offered the same training as the two-year technical programs. A new proposal for a one-year program in Farm Machinery Partsman was submitted and approved.

Will the new program attract students? Of course, an advisory committee cannot determine student enrollment. This is the local school's responsibility. The advisory committee does determine which school is currently doing a good job of student information and also determining which school is publicizing programs to potential students.

Student enrollment must be a consideration in designating a school to develop a program. This is not easy in the case of developing programs. Often a new program is approved at a single location to determine the potential and to develop a pilot plan which may be used for other programs of the same nature.

Does the proposed program fit into the overall state educational plan? Our state has a sort of referee, the Coordinating Council for Higher Education, which has determined all post-high school vocational and technical programs must be under the Wisconsin Board of Vocational, Technical and Adult Education. All professional programs must be offered through the University or State Universities.

Possibly the interested school is over-extended by existing program so far as space, equipment, or other resources are concerned and canno fully develop a comprehensive offering so far as this program is concerned. It is difficult to establish a program with full support in many cases, and partial support cannot give the students all they need. In this case certainly the old axiom "a half a loaf is better than none" does not apply.

Is the new program going to offer training in a changing technology that renders the program obsolete even before it is initiated? A state advisory committee is invaluable here. We cannot afford to train for non-existent jobs.

A program which used equipment involving long-term contracts may encumber funds which can be more useful in another area.

Does the program appear to have been planned so it may shift or lead into another program with a different objective that does not meet the original need? This will disrupt overall state planning.

The state advisory committee has been mentioned several times. Our office works with the advisory council in evaluation of a program during the planning stages. Briefly, our procedure is as follows:

The school submits an "Indication of Interest." This is reviewed by the state staff, and if it seems desirable, the school is encouraged to study the proposed program. The school surveys the businesses involved and its own resources and determines the potential local enrollment. If it decides the program is worthwhile, a proposal is written by the school asking for program designation.

There have been times when step one was eliminated and the school was invited to study a program and submit a proposal. A state advisory committee would be appointed at this time, if it had not already been done.

The proposal is carefully reviewed by the advisory committee and members may visit both the school and people listed as local advisory committee members. The advisory committee would recommend to the State Director and the State Board the designation of the program for the school or reject the proposal. Assuming recommendation for acceptance, the Wisconsin Board of Vocational, Technical and Adult Education would again evaluate and recommend a program to the Coordinating Council for Higher Education or reject a program. If the program was accepted by the CCHE, the school would be notified, and they could begin initiating a program.

A program is reviewed critically and often several times before it is initiated. In agriculture only one program has been rejected after recommendation by the advisory committee which speaks well for their adherence to the criteria necessary for developing a program.

Let us assume our developing program has met all the necessary criteria and becomes operative. Evaluation by local staff continues on almost a daily basis throughout the formative first year of a new program's existence. The first year is often one where as much time is devoted to development and planning of facilities, course outlines, course content, use of area resources, and informing people of its existence as is devoted to teaching students. After all, there is usually a small enrollment and these are all first-year students so more staff time is available during the first year. In Wisconsin there are few programs which have used a year to develop without enrolling any students.

First-year evaluation emphasizes the course content and use of area resources. Our advisory committee works closely with the instructors to insure they are teaching needed material. The State Office attempts to offer help in developing course content which will be challenging, but of a nature somewhat different than offered a college freshman. We want communications to be that and not English composition. Probably another major function carried out during the first year is evaluation of past recruitment activities. A strong recruitment program can then be planned for initiation during succeeding years.

Probably it can be said the first-year's evaluation is pointed toward qualifying the course as an associate degree program with technical status during the second year in the case of a technical program.

The evaluation for an associate degree again involves advisory committee members as well as State Office personnel in a team. While all areas are evaluated, it is not necessary that each team evaluate all areas. A typical Agri-business team consists of a business or distributive education supervisor, an agriculture supervisor, and at least two members of the advisory committee. This next year we will involve personnel from the teacher training staff of our institutions. This will enable them to become better acquainted with our programs.

The evaluation includes these areas as they relate to the program: supervision and administration of program, student services, program advisory members, plans for future development, instructional personnel, physical facilities, library, and curriculum.

I shall not dwell at length on our evaluation mechanics. They do rely heavily on self-evaluation by the local staff to determine if the program is meeting objectives designated by the local center. This does seem more important than merely gathering statistics for further legislative support. As each instructor is involved in writing up the monograph for review by local staff, the work will be done objectively. Soft spots will show up and methods developed for strengthening these areas.

A problem yet unsolved in both technical and vocational programs is knowing how well our graduates do three or five years after graduation. We have little information at present. Industry tells us this is what they want so far as training is concerned, but what happens to our graduates who receive this training? Do they realize the value of re-training or learning new skills and technologies through continuing education? Are they advancing into mid-management positions or proprietorships? We learn of this occasionally but not often enough.

My assignment was to dwell on evaluation. This certainly allows me to speak briefly about our young farmer program evaluation. Here we have a relatively immobile labor force whose year to year progress can be measured in dollars. The objective of this program is establishment of the individual in farming and an ever increasing net worth and labor income. The cost-benefit relationship substantiates the effectiveness of the program. This type of evaluation is often difficult in the field of education. Our instructors have accepted it and wholeheartedly believe it is a valid measurement.

Other things are considered of value in helping an individual instructor. Here again, the emphasis is on the individual instructor looking at his own programs. Because we had only 22 of these in Wisconsin last year, we were able to work with each of these men individually in analyzing his program.

Questions asked were: How many enrollees were in the program less than five years? A preponderance of people being served by one instructor for seven or eight years indicated that he was not helping people become established in farming. He was running an extension program and may not have a plan that would help the beginning farm operator who was not well versed in the basic skills necessary to utilize the latest technologies in agriculture. Probably he was doing an excellent job helping people to stay up to date on the latest technologies.

Was the class attendance acceptable? An enrollee should attend 70 percent of the class meetings. A large number of on-the-farm instruction calls and low class attendance or, even worse, acceptable class attendance and few on-the-farm instruction sessions for a beginning farm operator do not indicate a sound program.

Monthly reports are requested from each of our instructors. Did the instructor use about 90 hours for individual on-the-farm instruction last month? Some months this may not be practical, but it should average nearly 90 hours per month on a year-around basis. Of equal importance, what was the emphasis during the session? Was it of a nature that would teach the enrollee to solve his home problems?

Naturally, we want to know class attendance. If this is low, help should be given the instructor in conducting good class meetings which attract enrollees. Class planning for next month and other activities in which the instructor is engaged in are also important.

Evaluation is important. Let me re-emphasize that self-evaluation is more worthwhile for program improvement than any outside agency such as state or federal staff performing this evaluation. If we do not assume responsibility for evaluating our programs, an outside agency or persons will evaluate.

To evaluate we must have an objective. The local objective may differ somewhat from the state objective, and certainly both would differ drastically from a person not acquainted with the program's objectives. The results of our evaluation must be publicized. They may be in the form of goals or new objectives or new programs; however, because we are in vocational education they must also reflect employment figures.

The effectiveness of a program is difficult to assess yet every effort should be made to bring together all information we have regarding graduates and the positions they hold. These graduates and their evaluation of our programs are our most valuable asset, if the graduates felt the program worthwhile and that it had contributed to their success.

You see evaluation of vocational agriculture has not changed greatly so far as who was involved. We still find the teachers, administrators and much of the lay public involved in evaluating our program.

REPORT OF TASK FORCE

Major recommendations and guidelines for action developed by the task force are as follows:

1. The purpose of evaluation is basically to improve the effectiveness and efficiency of the program. Depending upon the outcomes of the program, measured by the success of students and the employment needs of society, systematic evaluation should provide evidence on which decisions are made to expand, reduce, or terminate the program.

2. Evaluation should encompass elements of both the process of developing the product and the outcomes of the program.

3. Evaluation is a continuous process, but a systematic and comprehensive assessment of the program at selected intervals of time is needed. Such intervals are dictated by the occupational success of the students completing the program, the changing needs of society, and the continuing need of society to have a sound base for justifying continuing support of the program.

4. The following areas for research and study are recommended: (a) Research is sorely needed to identify more effective measures of program outcomes other than the number of graduates entering employment for which they were trained; (b) More adequate measures of the quality of instructional programs and the products of these programs are needed. For example, how good are graduates in terms of competency, job satisfaction, earnings and advancement? (c) There is need for a continuous supply of information about the changing needs of society in relation to the number of graduates needed and the competencies needed by graduates of the various instructional programs; (d) There is a need for a continuous supply of information concerning the number and

characteristics of persons being served and those not being served; (e) What is success on the job? What are some acceptable levels of achievement for vocational agriculture graduates of instructional programs in area centers?; and (f) There is a need for instruments of increased validity and reliability for the task of assessing the process of instruction.

POST-HIGH SCHOOL YOUNG AND ADULT FARMER PROGRAMS IN AREA VOCATIONAL CENTERS

Summary*

The area vocational center can and should help meet the needs of people of all ages who can profit from courses in agricultural education. Community needs will vary and local teachers of agriculture should assume the leadership in determining the needs and in planning and conducting effective instructional programs.

Area centers should provide specialized courses that cannot be offered with present resources in local participating schools. Special adult instructors should be employed to provide a well planned program of adult and young farmer education. The program should be coordinated with the adult and continuing education programs offered in local participating schools. Duplication of effort and offerings between the area center and local participating schools should be avoided. Cooperation is essential in providing the needed adult education in agriculture in the geographical area served by the vocational center.

Adult education programs must be adequately financed. Local, state, and federal funds should be utilized for maximum effectiveness. Local businesses or student fees are another source of financial aid.

If an overall plan of adult education is developed for the area center and the participating local districts, more persons can be served effectively and efficiently. Enrollment and interest can be increased in both the area center program and the programs conducted in local participating schools.

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*A summary of seminar sessions relating to this topic. Presentations pertaining to the topic and task force recommendations follow this summary statement.

POST-HIGH SCHOOL YOUNG AND ADULT FARMER PROGRAMS IN THE AREA SCHOOLS

C. W. Dalbey
Chief, Agricultural Education
State Department of Public Instruction
Des Moines, Iowa

Young and adult farmer education will become a part of the area school program in most communities. The extent will depend upon the following factors:

1. General level of education in the community served.
2. The level of education in agriculture existing in the area.
3. The need for training to gear farming programs to demands of the changing farming structure.
4. The demand of related agricultural occupations to upgrade training to meet modern demands of the agricultural industry.

Implementing programs for young and adult farmers as well as those employed in related agricultural occupations must consider a number of existing situations. Among them are:

1. The extent to which the group is being served by both public and private institutions within the area served.
2. The autonomy and pride of the local districts in providing their own agricultural education programs.
3. The depth and extent of training involved in agricultural education in local communities.
4. The size of the area and driving distance to the area vocational school centers.
5. The dangers of duplicating supervision and funding and the student count of programs.
6. The willingness and necessary financing on the part of the area school to supplement local vocational programs.

Considering all the above factors, area schools will offer programs in young farmer education for those young men involved in farming immediately out of high school. Instruction at the secondary school level frequently fails to permit sufficient time for economics, marketing, and management training to operate the modern farm. Special emphasis will need to be placed in these areas of instruction with follow-up instruction on the local farms. The follow-up may lead to special services such as computer assistance in farm records, specialists in subject matter areas, and other services.

Young farmer education may be promoted under varying arrangements. The full-time student aspect is one of the more important and one being tried in some states. Students attend classes a minimum of four hours per day, four days per week with one day for follow-up on farms. Field trips, on-farm supervision, and tours make up the thirty hours per week of instruction. Other arrangements may be implemented for full-time students. Any system under consideration must consider the student's involvement in a farming operation. The living at home and ties with the home farm are a special advantage in area school agricultural education. All instruction must be practical and sound as much of it will be immediately applied. Young farmer education must involve extensive leadership training and practical experience with farm organizations. Students should be prepared to find a place in society should corporate farms become a major factor in the farming operation or the individual fail in his own farming enterprise.

Young farmer education may be implemented through special young farmer instructors working with vocational agriculture instructors in local high schools. Schools without vocational agriculture departments may be served through the specialist program.

Adult farmer education may become a major enterprise in the area school approach. However, it will probably take the form of condensed short courses on an enterprise basis. Due to driving distance and lack of teacher contact and service, it will probably not replace local adult farmer classes where strong instruction and community ties exist. Adult farmer instruction, as in young farmer instruction, may include special services such as computer accounting of enterprise records.

The area school approach in agriculture must not leave out those employed in related agricultural work. There will be opportunities for short courses and special training for workers in agricultural equipment, elevator management, and other agricultural occupations. Some Iowa schools plan to offer parts-man training in their programs this year.

The area school approach is designed to supplement and not replace local programs. Local school programs in agriculture will continue to be of major importance. It will be necessary for local programs to be stronger as they compete with the area approach. Local programs have the advantage of close local ties and associations with people.

The curriculum in adult and young farmer programs must center around the current and changing needs of the farming operations in the area served. It should be developed by strong advisory councils and guided by the assistance of a capable agricultural instructor. Informed advisory councils will provide support and publicity for the program. The curriculum should be reviewed

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periodically with advisory councils to determine whether or not it is meeting the needs of the students.

I wish to issue special warning to those not using advisory councils or those involving them in name only. If area schools are to receive financial support and function satisfactorily, local people must be involved in curriculum planning and evaluation. "Cut and dried" curriculums handed down by administrators and teachers are no longer acceptable in meeting modern day needs.

General education in vocational programs is currently under much discussion. It may be included in curriculums of adult and young farmer education providing it is related to the vocational objective of the students involved. Unrelated instruction may lead to enrollment problems in vocational courses. Excess of general education in curriculums may lead to decreases in the necessary skill training, therefore creating a necessity for increasing the length of the course.

The success of young and adult farmer education in the area school will largely depend on the quality of instruction. Instructors at the area school level should possess a sound background of experience along with the necessary academic training to teach on the college level. Unlike the conventional college campus, the student will be close to farming operations to test the soundness of the instruction. There will need to be in-service training available for instructors needing improvement in weak areas and new ideas in other areas of training.

Young and adult farmer education has a bright future in the area school. It will be a challenge to state staffs and teacher education to guide and direct this new phase of agricultural education.

REPORT OF TASK FORCE

The task force agreed that a better description for the topic to be discussed would be "post-high school young and adult agricultural education programs." Trainees in these programs would be engaged in any occupation requiring knowledge and skill in agriculture.

The major recommendations and guidelines for action developed by the task force are as follows:

1. Determining needs of adult education: In an agricultural community people of all ages can benefit from courses in agricultural education. The area vocational center can and should help meet this need. A school system employing a teacher of agriculture for high school students also

has a need for young and adult programs. School administrators, boards of education, and advisory committees should help in determining needs for adult education. Agricultural industries can assist in determining needs for the off-farm occupations. However, local teachers of agriculture must assume leadership in determining needs for adult education in agriculture.

2. Instructional personnel: An adequate number of teachers and sufficient time of teachers must be provided to offer continuing education programs. Multi-teacher departments may be necessary to accomplish this task. Qualified staff members should be hired for specialized instruction. A member of the vocational education center staff should coordinate the young and adult program in the geographical area served by the vocational center. Pre-service and in-service programs are needed to prepare teachers for young and adult education in agriculture.

3. Coordination with other agricultural agencies: Duplication of effort should be avoided; cooperation and communication are essential. If sufficient enrollment can be secured, courses should be held in the various cooperating schools. This would help to decrease driving distance of enrollees.

4. Financing: All programs should be adequately financed from local, state, or federal sources. Agricultural businesses may be one source of local financial help. It may be necessary for students to pay for specialized services such as processing records for their own businesses.

5. Group organization: Young and adult agriculturalist organizations at local and state levels help to improve the instructional program. Activities of these organizations should be of an educational nature.

6. Problems for study: The task force recommends the following topics for study and research. (a) Evaluation of a young and adult education program in area vocational centers. (b) Ways to organize and coordinate young and adult education programs at area centers with programs offered by local participating schools. (c) Certification of specialized teachers for adult programs. (d) Curriculum and teaching materials for adult education. (e) Methods of providing an adequate supply of teachers. (f) Facilities and equipment needed for various programs. (g) Methods of promoting needed programs in area centers. (h) Optimum teacher load. (i) Method of scheduling courses at the area center and local participating schools.

ADMINISTRATIVE PATTERNS IN VOCATIONAL EDUCATION THAT ARE COMPATIBLE WITH SECONDARY EDUCATION ADMINISTRATION*

T. J. Jensen
Dean, College of Education
Bowling Green State University
Bowling Green, Ohio

Mr. Chairman, dignitaries at the head table, guests and fellow educators. I am honored to visit with you for a few minutes on a vital topic in education. Lend me your ears--you see transplants started a long time ago. Wasn't it Mark Anthony who said, "Lend me your ears."

Two things came to mind as I set about preparing these remarks. First, I thought of Barnum and Bailey's three ring circus and the great success story of that enterprise until it was superseded by TV and other means of entertainment. The point I wish to emphasize is that the circus operated three rings simultaneously with coordination, cooperation and successful results. Each ring was distinctive and unique, each ring was competitive for audience appeal, each ring had a certain autonomy, but each ring made its contribution under one overall management to the primary purpose and object of the circus--entertainment of the audience. There are a number of analogies which may be drawn between the Barnum-Bailey show and education today.

The second thing that came to mind was a remark made by Dr. James B. Conant to the effect that when educators start talking about "basic questions"--such as administrative compatibility, organization, leadership, supervision and the like--their eyes tend to glaze over and they get an uneasy feeling like watching an old movie being rerun for the fourth time. So it is with this topic. Are we really talking about anything new?

Bob Hope tells this story on himself. Early in his life as a comedian he was appearing in a St. Louis theater. He had just gotten underway with his lines when a sudden loud groan came forth from a near front row. A commotion was set up around a woman who gave birth to a child right there in the theater. It was a show stopper--the woman and her baby were carried out of the theater. Bob decided to go on and finish as quickly as possible. After the show he was talking to a stagehand and asked him what he thought of the affair. The stagehand's remark was, "Well, that was the first new thing in this theater in a long time."

Regardless of Dr. Conant's deploring observations there are some "first runs," "premiers," and new concerns to be talked about in "basic questions" on education. No modern administrator can escape what have become new and re-identified concepts as related to our culture. It is a new vocabulary. Listen and you are sure to recognize some of them:

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*Presented at the banquet for seminar participants, September 19, 1968.

- Relevance
- Frustration
- Negativism
- Alienation
- Urbanization
- Socio-economic sensitivity
- Civil disorder--lawlessness
- Consumer service orientation
- Credibility
- Identity
- Cybernetics--automation
- Computerization
- Negotiations
- Polarization
- Marketable skills
- Innovation
- Change

These concepts challenge us in every aspect and function of education--general, cultural, professional or vocational education. Many of these have had a persistent way of nagging and haunting most every consideration of educational topics now and in the past several years. It takes no sage to stand here and remind you that many of them will continue to nag and plague us for sometime.

Negativism

May I select just one on the list for this discussion--negativisim. Seldom in history has there been a period equal to current times for shear expressed negativism. It's almost unpopular these days to express a note of positivism and optimism. Johnny can't read, can't figure, can't write, can't think, can't spell, and now he can't find a job because vocational education has let him down. Among the current gems of negativism on education is George Leanard's book, "How the School Stunts Your Child."

Operating and bond levies for schools are being turned down right and left. Higher education is being castigated as "snobbish." Dissidents are on the rampage in high schools and colleges. Secondary education is being scored as inappropriate for most students, utterly lacking in preparing youth for the world of work and more or less oblivious of the "dropouts" and "force outs." The vocational educators join the chorus of negativists by decrying the support for vocational education at local, state and federal levels pointing to oversights with regard to vocational and technical education in recent federal legislation and interpretations by the U.S.O.E. General educationists and vocational educationists raise their adrenalin counts and expend much of their energies defending empires and points of view.

Well, I could go on, but let's stop and ponder for a moment. Three observations seem pertinent. First, if we were to listen only to the negative side of the situation we could be easily lulled into a state of total dejection and despair. Second, if everything is as dark as it is often painted, one wonders how in the world we have muddled through in the country to becoming second to none in scientific and technological developments leading to standards of living not realized anywhere else in the world. Third, there is just enough truth in the exclamations of the negativists to cause anyone with intelligence to be concerned and to seek ways and means to better things.

A Positive Note

May I remind this fine audience that there is much that is good and right about the world of education that should not be sold "short." Your seminar here this week is an example.

According to my good friend Byrl Shoemaker, the state board has distributed $5.7 million in federal funds for vocational school construction and equipment. In Northwestern Ohio, we have five going vocational-technical school operations. These include Penta, EHOVE, Four-County, Sandusky County, and Pioneer. Dr. Shoemaker states that 34 joint vocational schools have been approved by the state board.

We hear so much about the plight of the ghetto--even here there are positive signs of improvement. Negro migration from southern farms to big city ghettos is slackening off. From 1950 to 1966 Negroes in central cities increased by 5.6 millions. Recent Census Bureau and Department of Labor findings show that this migration tapered off in 1966. In the past eight years, the "education gap" has been reduced from one and one-half years to less than one-half year. In 1966 and 1967, more than two million Negroes rose above the government's official poverty level, and in the past decade the number of nonwhite families with incomes over $8,000 per year has tripled.

This is not to overlook the much that still needs to be accomplished such as doing something about unemployed nonwhite teenagers estimated at the 32 per cent level providing training and retraining for heads of families and the like. The point is that some progress is being made, some hope exists, and there are some positive elements that we should build upon.

Legislation. There is also some reason to be optimistic about legislative provisions for vocational-technical education at all levels. Local levies have been supported.

Highlights of federal legislation show a steady positive progression beginning with the 1906 National Society for Promotion of Industrial Education; 1914 Congressional Resolution calling for Vocational Education; 1917 Smith-Hughes Act; 1929 George-Reed Act; 1934 George-Ellsey Act; 1936 George-Deen Act; 1946 George-Barden Act; 1956 Health Amendment;

1956 Fishery Amendment; 1958 N.D.E.A.; 1961 Area Development Act; 1962 Manpower Training Act; and 1968 Vocational Education Amendment.

Whatever comes of the 1968 amendment through interpretation and final implementation, the following seems relatively sure:

-- mandate for expansion and improvement of vocational technical education at all levels,

-- vocational programs for disadvantaged in urban areas,

-- extension of work study programs,

-- encouragement and support of innovative programs and projects,

-- extension of support for leadership, development and upgrading vocational teachers,

-- encouragement for research,

-- encouragement for curriculum development,

-- support for homemaking, consumer education, and home economics education.

You must concede that this brief review of positivism cannot go unnoticed. Indeed there are indications that vocational and technical education stand at the threshhold of their "shining hour" in the days ahead, but only if we are flexible enough, adaptable enough, intelligent enough, and capable of overcoming that serious disease that affects all education; namely, hardening of the categories.

The Rocky Road Ahead

No one need remind this group of the serious problems ahead in affecting quality educational programs in vocational and technical education. Let me remind you of a couple of problems that affect all education. The first of these is what may be called "qualitative changes." Without a long explanation this refers to (a) lengthening life span of man; (b) patterns and rhythms of work-life spans for individuals; and (c) application of knowledge to work. We will have more and more "knowledge jobs" and knowledge has become the foundation of skill. Again, a brief review of what has happened to the "work-life span" for individuals since the turn of the century leads to some interesting facts and conclusions.

Second, according to some expert guesstimates fifty percent of the job categories in the 1980's have not been invented as yet. The problem is how to prepare youth for jobs yet to be invented and used in much of their work-life span, and contrariwise escape the trap of preparing for yesterday's outmoded jobs.

The third major problem centers on how to break out of the mold, part with traditions and "sacred cows," and face up to the nitty-gritty realities of changes and innovations necessary in tomorrow s education of youth in an era in which knowledge is being doubled every five years.

Compatibility

The topic assigned to me dealt with administrative patterns of vocational education that are compatible with secondary education. The statement makes the assumption that secondary education as it now exists is sacrosanct and that somehow vocational and technical education must adjust to it. This I do not buy.

General, cultural, basic, vocational, technical and even professional education should have at least one fundamental objective in common--maximal developments, preparation, achievement, and assistance to aid every child to attain his fullest possible potential and adjustment to life. In the light of conditions and circumstances discussed in this paper, this may well mean redefinitions of secondary education, redefinitions of vocational and technical education, and redefinitions of the roles of schools in providing such educations.

The challenges involved in these redefinitions are tremendous. It's rough going when you take on "entrenched establishments," but as I see it, that is what must take place now, and the sooner the better.

Think through carefully the analogy of the "three ring circus" operated under one tent, competitive for audience appeal, flexible and innovative in creating something new each season, each with a competent "ring master," and each focused on a common objective--entertaining an audience with widely varying tastes, whims and entertainment needs.

You can be sure that this is accomplished only through the highest level of cooperation and coordination.

If the needs of youth are held to be the primary objective of all education, if the various facets of education can be redefined, if the problems dealing with vested interests, entrenchments and "establishments" can be solved, and if we have the courage of our convictions to effect change with openmindedness, I predict the problems of compatibility will be solved and vocational, technical and general academic education will ultimately achieve a unique unity heretofore unimagined.

APPENDIX B

PAPERS PREPARED FOR FOLLOW-UP CONFERENCE

SOME IMPLICATIONS OF THE BOWLING GREEN SEMINAR

J. Robert Warmbrod, Professor
Department of Agricultural Education
The Ohio State University
Columbus, Ohio

Persons from thirty-six states participated in the National Seminar on Agricultural Occupations Program Development in Area Vocational Schools held at Bowling Green State University, Bowling Green, Ohio, in September 1968. In December 1968, one participant from each of the thirty-six states was asked to provide information concerning the status in his state of agricultural occupations program development in area vocational centers. (See Appendix F for the instrument, "Status of Agricultural Occupations Program Development in Area Vocational Schools or Centers," used for collecting the data and information.) The information collected from each of the thirty-six states concerned the following: (1) number and types of vocational programs and agricultural occupations programs in operation or planned in area centers; (2) staffing policies and practices for agricultural occupations programs in area centers; and (3) facilities for agricultural occupations programs in area centers. Information was collected about area center programs for both high school and post-high school students. This report deals primarily with information concerning programs for high school students since that is the main concern of the follow-up conference.

I shall report to you what the thirty-six states reported to us. I suggest that we use this information as a report of the present situation concerning agricultural occupations programs in area vocational schools or centers. This information should then be used as a source of questions and concerns for consideration during this conference as we develop guidelines for agricultural occupations program development in area vocational centers.

Types of Area Vocational-Technical Schools in Operation or Planned

This section of the report concerns area center programs in vocational-technical education. It is not limited to programs in agricultural education in area centers. One-third of the thirty-six states reported no area center programs in operation or planned for high school students. For the other twenty-four states some general findings imply questions that should be of concern to us during the follow-up conference. These general findings are:

--In only four of the twenty-four states providing vocational-technical education in area centers are area programs operated only as a part of comprehensive high schools.

--In twenty states area vocational programs for high school students are conducted as separate area centers (schools) or conducted both as separate area centers and in comprehensive high schools.

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--Separate area centers are of two types: (1) students maintain enrollment in and graduate from their home high schools and are transported to the area center for vocational and closely related subjects; (2) students complete both vocational and general education subjects in area centers and graduate from the area center. The most frequently used procedure appears to be the system where students are transported to the area center only for vocational and closely related subjects.

--In contrast, programs for post-high school students are most frequently provided in separate institutions or in departments of vocational-technical education in community colleges or junior colleges. Most of the states have area programs for both high school and post-high school students.

These findings raise some questions and concerns with which we should deal during the follow-up conference.

1. What are the problems and concerns encountered in coordinating programs for high school students in area centers with programs conducted in local schools? We must be concerned with coordinating vocational education in area centers with general education in local schools; coordinating vocational education in area centers with vocational and pre-vocational education in local schools; coordinating vocational education in area centers with general education in area centers.

2. How can coordination and articulation between programs in area centers and general and vocational education in local schools best be accomplished? Who should be involved? What activities are appropriate and effective?

3. What are the problems and concerns encountered in coordinating programs for high school students in area centers with vocational-technical programs in post-high school institutions?

4. How can coordination and articulation between programs for high school students in area centers and post-high school vocational-technical programs best be accomplished? Who should be involved? What activities are appropriate and effective?

Number of Area Centers Offering Programs for High School Students in Operation or Planned

The thirty-six states reported that 380 area centers offering programs for high school students were in operation during 1968-69. Three states (Kentucky, New York, and Texas) account for 40 per cent of the area centers in operation in 1968-69. Nine states had five or less area centers in operation during 1968-69. The thirty-six states reported that 370 area schools offering programs for high school students had been approved (funding assured), were under construction, or in various stages of development. Three states (Michigan, New Jersey, and Virginia) account for 40 per cent of the area centers funded and/or under construction.

So the job is only half done. There are as many area centers under construction or on the drawing board as are currently in operation. The implication here is rather obvious: How do we get agricultural occupations programs established in developing institutions?

Agricultural Occupations Programs for High School Students in Area Centers

Two-thirds of the area centers offering programs for high school students in 1968-69 provide agricultural occupations programs (250 of the 380 centers in operation in 1968-69 were reported to offer agricultural occupations programs). Three states (Texas, Missouri, Connecticut) account for 40 per cent of the agricultural occupations programs in area centers in operation in 1968-69. Only three states with area vocational centers for high school students which are in operation in 1968-69 do not offer agricultural occupations programs. For approximately 60 per cent of the area centers for high school students funded, under construction, or planned, there is an indication that agricultural occupations programs will be included in the vocational programs offered.

By way of contrast, only 30 per cent of the post-high school institutions offering vocational-technical programs in 1968-69 provided agricultural occupations programs. Some 45 per cent of the post-high school institutions funded, under construction, or planned indicate that agricultural occupations programs will be included in the offerings of those institutions.

These findings lead to the following questions for consideration during the follow-up conference.

1. What criteria should be used in determining whether agricultural occupations programs are needed in area vocational centers offering programs for high school students?

2. What procedures and techniques are used to determine the need for agricultural occupations programs in area schools? Who should be involved? What time schedule is necessary for determining whether agricultural occupations programs should be offered?

3. What persons and groups other than agricultural educators should be involved in determining the need for agricultural occupations programs in area centers?

4. What criteria should be used in determining the number (or percentage) of area vocational centers for high school students in a state that should offer agricultural occupations programs?

5. Is state-wide or state-level planning for the number and types of agricultural occupations programs in area centers desirable or needed? Who should be involved in this planning? What techniques and procedures should be used? What time schedules are required? What coordination in planning for agricultural occupations programs should there be between high school and post-high school programs?

6. How can agricultural occupations programs be established in area centers that are currently in operation? How can agricultural occupations programs be established in area centers that are in the development and planning stages? How do the procedures, techniques, and personnel needed in each of these situations differ?

Types of Agricultural Occupations Programs for High School Students

Area schools offering agricultural occupations programs in 1968-69 reported the following rank order of types of agricultural occupations programs offered.

Instructional Area	Per Cent of Schools Offering Program
Agricultural production	38%
Agricultural mechanics	29%
Ornamental horticulture	20%
Agricultural supplies	5%
Forestry	3%
Agricultural products	2%
Agricultural resources	1%

Indications of the types of agricultural occupations programs planned for area schools which are funded or under construction reveal the following rank order of programs being developed.

Agricultural mechanics

Ornamental horticulture

Agricultural production

Agricultural supplies

Agricultural products

Forestry

Agricultural resources

If we move to more long-range planning, that is, planning of agricultural occupations programs for area centers that are not presently funded or under construction, the information reported by the states reveals the following rank order of agricultural occupations programs planned.

Agricultural supplies

Ornamental horticulture

Agricultural mechanics

Agricultural production

Agricultural products

Agricultural resources

Forestry

I call your attention to three observations which occur to me after reviewing this information. First, you will note that the three most frequently reported instructional areas, except for the most long-range planning, are instructional programs in agricultural production, agricultural mechanics, and ornamental horticulture. Second, it is evident that the more long-range the planning becomes the lower in priority agricultural production becomes. For the most long-range planning, agricultural supplies replaces agricultural production in the three most frequently reported instructional areas. Third, in all cases (current programs and programs planned) the three least frequently reported instructional areas are agricultural products, agricultural resources, and forestry.

This leads to the following questions which are appropriate for discussion and action during the conference.

1. What criteria should be used to determine the types of agricultural occupations programs (agricultural production, agricultural mechanics, etc.) that are appropriate for area schools? Who should be involved? Is state-wide planning necessary? Can this decision be made in area center districts alone?

2. What types of agricultural occupations programs are most appropriately offered in local schools?

3. How does the offering of agricultural occupations programs in area centers alter or influence programs in agricultural education offered in local schools?

4. What criteria should be used in determining whether programs can be most effectively offered in area centers, local schools, or both?

5. How does the nature of instructional programs (content and activities) in area centers differ from instructional programs in local schools?

6. What techniques and procedures should be used in determining subject matter content of agricultural occupations programs in area schools?

7. How can the effectiveness of agricultural occupations programs in area centers be evaluated?

8. How do facilities and equipment needed for agricultural occupations programs in area centers differ from that needed in local schools? What facilities and equipment are needed?

Teachers for Agricultural Occupations Programs in Area Centers

About 80 per cent of the teachers currently teaching in agricultural occupations programs for high school students in area centers are teachers who were regularly certified to teach vocational agriculture. The next largest group of teachers (10 per cent of those currently employed) are persons who hold baccalaureate or higher degrees in technical fields of agriculture but were not regularly certified teachers of agriculture. Recruiting teachers with little or no formal education beyond high school directly from business and industry was not reported as being frequently used as a source of teachers for agricultural occupations programs in area centers. The states reported that only 4 per cent of the currently employed teachers were recruited from this source. The states reported that 6 per cent of the teachers of agriculture currently employed in area centers had backgrounds other than the three categories mentioned.

In contrast, teachers currently employed for teaching agriculture in post-secondary institutions came from the following sources: regularly certified high school teachers, 50 per cent; baccalaureate or higher degree in technical fields of agriculture but not regularly certified teacher of agriculture, 30 per cent; business and industry, 17 per cent; and other sources, 3 per cent.

Only four of the thirty-six states reported pre-service teacher education programs specifically designed for teachers of agricultural occupations programs in area centers. Only seven of the thirty-six states reported in-service teacher education programs specifically designed for teachers of agricultural occupations programs in area centers. Comparable figures for post-high school programs were nine and eight states, respectively. The general impression is that special teacher education programs are most frequently special workshops within existing courses or within existing in-service and pre-service teacher education programs.

I propose the following questions for discussion during the conference:

1. From what sources can teachers for agricultural occupations programs in area centers be recruited?

2. Should there be teacher education pre-service programs specifically for teachers in area centers?

3. Can experienced, regularly certified teachers of agriculture plan, conduct, and administer agricultural occupations programs in area centers without additional in-service education?

4. How is teaching agriculture in area centers different from teaching agriculture in local schools? How are the two similar?

5. What types of in-service teacher education programs are needed for teachers in area schools who are not regularly certified teachers of agriculture? To what extent should this type of teacher be used?

6. What criteria should be used in selecting teachers of agricultural occupations programs in area schools? How valuable is prior experience in a local school? Under what circumstances should beginning teachers be employed in area centers?

7. How can state departments of education best supervise programs and personnel in area centers? Does the administrative structure of area schools require patterns and techniques of supervision different than those considered effective in local schools?

8. For what personnel in area centers other than teachers should teacher education and supervisory programs be developed? How should these special programs be developed?

Facilities

Data reported by the thirty-six states indicated that for area programs of vocational-technical education in general about one-third of the facilities are for high school students only, one-third for post-high school students only, and one-third for both high school and post-high school students. For area center programs in agricultural occupations, the states reported that four out of ten programs were provided in facilities for high school students only, four out of each ten programs in facilities for post-high school students only, and two out of each ten programs in facilities for both high school and post-high school students.

HOW TO APPRAISE NEEDS AND RESOURCES WHEN CONSIDERING THE ESTABLISHMENT OF A NEW AREA SCHOOL IN A SPECIFIC COMMUNITY

Everett E. Nicklow, Director
Somerset County Area Vocational-Technical School
Somerset, Pennsylvania

It is my assumption that guidelines should be sufficiently broad and yet be applicable to specific situations. To appraise needs and resources one must compile, analyze, and consider in all respects needs and resources as they affect the establishment of an area school in a specific community.

First we will consider needs. The need should be related to a specific occupation. We should be in position to know the number employed in the occupation at present, five years hence, and ten years hence. Another important consideration is the annual withdrawal in the particular occupation. Annual growth is an important consideration in establishing a need in a specific occupation. Combining the three--number employed, annual withdrawal, and annual growth--we are in a position to establish the annual need for employment in a specific occupation.

To determine further the supply of persons with the specific occupational training provided by training institutions will give the available supply from which it can be determined whether there is an excess or shortage of trained persons in a specific occupation. This represents the need for training in a specific occupational area which may be considered in terms of curriculum in establishing a new area school. This would also represent need for adding to or deleting from the curriculum of a presently operating area school.

To appraise resources one must consider many facets. I will mention a number of resources which should be considered. One may consider the following as resources: financial resources, personnel resources, business and industrial resource, administrative resources, public relations and communicative resources, advisory resources, philosophical resources, and political resources.

Financial and personnel resources are most commonly thought of when speaking of resources, yet they are not the only bases to be considered. Financial resources are rightly listed first. The educational program must certainly bear the test of cost constraints to become a functional vocational-technical program. Some measures of resource limitations may well be availability of resources, total costs, and cost per pupil. Needs can be given an effectiveness rating based on the following: growth, density, shortage, and skill level. In determining selection criteria, it is possible to rate programs being considered by dividing the effectiveness rating by the per pupil cost. Reference is made to the following example.

Example:

	Case A		Case B
Growth (0 - 10)	4	Growth (0 - 10)	7
Density (0 - 10)	3	Density (0 - 10)	3
Shortage (0 - 10)	5	Shortage (0 - 10)	7
Skill Level (0 - 10)	6	Skill Level (0 - 10)	7
Total Rating	18	Total Rating	35

Per pupil cost = $3,600

$\frac{18}{3600} = .0050$

Per pupil cost = $4,000

$\frac{35}{4000} = .0086$

To a degree, interest on the part of a student or an adult constitutes a need. With a Student/Adult Interest Survey one can determine the expressed interest in occupational training. There are many persons who strongly feel a majority of the students' interests must be met in the establishment of a curriculum in an area school.

An advisory group should first consider what areas of occupational training should appear on the survey. If in doubt, list the occupational training choice. It would be my suggestion to always leave the interest survey open-ended, that is to allow space for persons completing the survey form to list his or her own choice of occupational interest. Also obtain the thinking of business and industry as to their expressed need for vocationally-technically trained prospective employees.

The Advisory Committee should participate in the appraisal of needs and interest, as well as resources, in recommendations concerning the establishment of an area school and occupational training to be offered in the area school.

HOW SHOULD STATE LEADERS BRING ABOUT COORDINATION AND ARTICULATION BETWEEN THE AREA SCHOOLS AND MEMBER SCHOOLS

Harold L. Noakes, Chief
Bureau of Agricultural Education
State Education Department
Albany, New York

At the Bowling Green Seminar held in September, Dr. Ramsey did a most effective job in calling our attention to the nine resources available for the development and establishment of area occupational centers. The recognition and utilization of these resources has paved the way for the development of many area occupational programs.

It is my assignment today to propose guidelines which may aid a state staff in bringing about coordination and articulation between area occupational centers and local schools. In order to approach this problem, we must pause to recognize the broad responsibilities of the area center both in terms of the Vocational Education Act of 1963 and the 1968 Amendments. The primary emphasis is to serve people wherever they may be located and whatever their abilities might be.

The local school has served agricultural education well under the old acts. In many instances these schools will continue to provide an effective program in training students for careers in agriculture. The number of such schools is declining each year in the Northeast.

The area occupational center has a twofold responsibility to local schools. The first is to supplement the instruction offered in local schools where agricultural education is provided. The second responsibility is to extend agricultural education to serve geographic areas and schools not previously served or which can be served more efficiently by such a center.

The major goal of the state staff should be to make agricultural education available to all persons in the state who can benefit from such instruction. These persons include students living in urban as well as rural areas and those interested in training for off-farm agricultural occupations as well as farming. Included are the environmentally disadvantaged, the handicapped, and those with special needs, both youth and adults.

The state staff should aid local administrators and area directors in determining the interest and need for agricultural education in a given area. Assistance can be provided in guiding student interest and employment opportunities studies and evaluating the data gathered. The results of such studies can then be presented at area meetings of teachers of agriculture, guidance personnel, and administrators as a basis for discussion and arriving at a decision concerning the need for introducing programs in agricultural education.

The state staff should provide leadership in developing guides for use by area directors and local school administrators dealing with curriculum offerings, facilities for agricultural programs, lists of recommended equipment, and resource materials.

The state staff should aid in the coordination of agricultural programs offered at area occupational centers with those offered at local schools. Area directors can be encouraged to call meetings of teachers of agriculture, agricultural advisory committees, guidance personnel, and school administrators to discuss the role of the area occupational center and the supportive services that can be provided local schools. These services include the offering of specialized courses in agriculture which cannot be economically offered in local schools, programs for out-of-school youth and adults in one or more of the specialized areas of agriculture, and guidance and placement services to name a few.

Further coordination can be affected through visits by state staff members to local schools and area centers to review program offerings and aid in identifying needs. A cooperative program review in which the schools and state staff participate has proven to have much merit. Such a review identifies the strengths of the program, areas needing attention, and recommendations for future action.

The state staff in agriculture should cooperate with staff members in other occupational fields in identifying areas of service to be provided by each subject matter area. This practice is a guard against jurisdictional problems which otherwise might arise. Regular meetings of state staff members from the several occupational fields also paves the way toward better understanding and the development of interdisciplinary or multi-occupations programs. All jobs do not fall neatly within a given subject field. Many incorporate competencies and knowledge from several occupational fields.

The state staff should guide the development of curriculum materials to aid the articulation of instruction provided at local schools and area centers. Courses to be offered at the ninth- and tenth-grade level should be introductory and free standing. They should include elements of orientation to the field of agriculture, basic science, mathematics and mechanics of agriculture, and personal and citizenship development. Such courses are valuable to students even if they decide not to complete training programs in agricultural education. The courses developed for use on the eleventh- and twelfth-grade levels should be modular in nature to provide the utmost flexibility to enable students to meet individual interests and training needs.

Guidance and assistance should be provided by the state staff in encouraging the development of innovative programs to serve more effectively persons who can benefit from agricultural instruction. The weight of financial aid should be made available to support such innovative programs rather than continue the support of established programs.

The state staff should work closely with its state association of teachers of agriculture and guide the development of an association that will serve all teachers of agriculture. There are many new teachers coming into the field who lack the traditional background of farming. Every effort needs to be made to provide a professional structure that will attract the teachers in off-farm courses in agriculture and area centers into the state association.

The traditional boundaries of teacher groups in New York State have been county lines. These political boundaries are no longer significant in educational planning. Therefore, the state has been subdivided by the Association of Teachers of Agriculture of New York into six major districts. These districts follow boundaries of areas served by area occupational centers. These in turn will be further divided into sub-districts which also will follow similar division lines. This provides a structure for making all teachers in an area, both local school teachers as well as teachers at an area center, a working part of the professional association team.

The FFA has been a vital force in agricultural education for over forty years. It grew out of agricultural programs then in operation which were almost exclusively farming. At the present time the FFA is facing the problem of meeting the changing needs of a new structure in agricultural education. State staff members can provide vital leadership in guiding state FFA associations into a new structure which will provide equal opportunity for membership and recognition to all students enrolled in agricultural courses.

There continues to be a need for close cooperation between state staff and teacher education staff in developing workshops for upgrading and/or retraining teachers of agriculture for present and future programs. There is a growing need for training programs for head teachers or coordinating teachers employed in multiple-teacher agricultural programs conducted at area occupational centers.

The state staff should also provide leadership to bring about changes in certification requirements of teachers of agriculture. This involves working with teacher certification units on the state level and with colleges and universities providing teacher education programs in agriculture.

Area occupational centers will play an increasingly important role in agricultural education over the next decade. It is important that such programs be considered an integral part of activities in agricultural education. State staffs should view with deep concern the responsibilities in providing leadership to these new developments and coordinating these with local school programs.

EVALUATING AREA VOCATIONAL-TECHNICAL SCHOOLS

William L. Hull
Associate Professor of Agricultural Education

and

Charles O. Hopkins
Research Associate in Occupational Education
Oklahoma State University
Stillwater, Oklahoma

Evaluation of an individual or program contains the dimensions of a dilemma. On the one hand evaluation holds out the hope of improving the current situation; yet the threat of a reproach also exists. It is little wonder that most people dislike being evaluated and vested interests manage rather successfully most of the time to ward off the threat of change.

Stufflebeam (8) defines evaluation as "the provision of information through formal means, such as criteria, measurement, and statistics to supply rational bases for making judgments which are inherent in decision situations." A decision is a choice among alternatives, and a criterion is a rule by which values are assigned to alternatives. Operationally, a rule becomes the specification of variables for measurement and the development of standards for use in judging.

The specification of criteria for evaluating area vocational-technical schools exists as the major thrust of this paper. However, before listing criteria for evaluation it becomes useful to study more about the process of evaluation itself and delve into the legislative mandate for evaluation of vocational-technical education. The paper concludes with a suggested tentative guideline statement.

Evaluation is a methodological activity which is based on performance data. It consists of gathering information with a set of goal scales to yield either comparative or numerical ratings. The process is similar whether one is evaluating animals in a show ring or peaches on a tree.

In a presentation on evaluation in vocational agriculture Sutherland (9) listed eight general principles of evaluation:

1. Evaluations of educational programs should be made in terms of the objectives of these programs.
2. Evaluations should include assessments and appraisals of both product and process.

3. Evaluation should be a continuous process, not just a "point-in-time" judgment.

4. Evaluations should be made by teams composed of both professional and lay personnel.

5. Evaluations of publicly supported programs should include economic factors and be concerned with input-output relationships.

6. Evaluations and appraisals should be made not only on the basis of what has been done, but also on what has not been done.

7. The major purposes of evaluation should be to provide quality control and a basis for intelligent change.

8. Evaluations should be concerned primarily, if not exclusively, with the key indicators of success or failure.

Evaluation differs from research in at least two dimensions, in the rigor of the controls and in the manner in which value questions are incorporated in the data. Frequently value judgments are explicit in the selection and definition of the problem as well as in the implementation of the procedures. Data collected are heavily influenced by feasibility. Choices, when possible, reflect value judgments of decision-makers or of those who set policy (4). Completely objective evaluations of programs and individuals may not be feasible at the current level of goal specification.

Strategies For Evaluating Programs

The value of relating evaluative information to decision-makers for planning purposes cannot be over-emphasized. Information needs vary at different levels of generalization in the decision-making process and at different stages of program planning over time. Stufflebeam (8) relates four strategies for evaluating educational programs: Context evaluation would be used when a project is being planned. Input evaluation should be used immediately after context for specific programing of activities. This stage would consider the types of courses which should be taught in a particular area school. Process evaluation should be used continuously after the program was initiated and during the implementation of the project. Product evaluation should be used after a complete cycle of the project. The latter type of evaluation holds the greatest promise for results, but remains the most difficult to measure. It requires time for the effect of a program to occur.

Product evaluation usually takes the form of assessing student characteristics which, allegedly, have been influenced by a vocational-technical program. If student characteristics are defined in behavioral terms, "what the student can do" becomes the criteria for evaluating program effectiveness. Performance criteria cannot by themselves attribute causal relationships to educational programs. Unless comparisons of student performance can be made with a prior level, say before the student enrolled in the course, or with students' performance in another program, no bases can be established for linking educational program (5) with student success in occupational activities. Moss (6) suggests five guidelines for establishing performance criteria for educational programs:

1. Instructional programs are to be evaluated by the product outcomes.

2. The matrix of evaluative criteria should include the potential outcomes relevant to each of the different philosophies or value systems.

3. Expected outcomes of educational programs can be stated at several levels of specificity.

4. Indicies of program outcomes should not only be consistent with philosophical positions, but they should also be sensitive to variations in program characteristics.

5. It would greatly facilitate weighting the relative merits of programs if it were possible to assign monetary values to program outcomes.

Summative evaluation is the responsibility of each educational program director, but appraisal of program development must start the moment an educational program is conceived. Scriven (7) discusses what he calls formative evaluation which seeks to provide information to the planner before constraints become rigid and solidified.

The Legislative Mandate for Evaluation

Congress has been clear on the need for research and evaluation to be the leading edge of vocational education. Provisions for a national advisory council authorized by P. L. 88-210 to review and recommend improvements in vocational education programs have been continued and extended to state and local programs of vocational education in P. L. 90-576.

Qualifications for membership on state and national advisory councils has been specified in detail. These qualifications become cues for priority program development needs. Section 104 of P. L. 90-576 prescribes the councils to be composed of people familiar with manpower problems, experienced in the education of handicapped persons, familiar with the needs of individuals disadvantaged by their socio-economic backgrounds, having special knowledge of post secondary and adult vocational education programs, etc. The language of the law is difficult to misinterpret. The duties of the National Council are listed in the Vocational Education Amendments. Among others, the National Council "shall review the possible duplication of vocational education programs at the post secondary and adult levels within geographic areas. . . ."

The loci of leadership in vocational-technical education lies at the state level. National program planners expect state government leaders to work out a master plan for vocational-technical education. Inequities exist in most states in the ways in which the costs of vocational education are shared by the local school district, the State and the Federal Government. In most cases by far the largest share is paid by the local school district. The 1968 Advisory Council (12) asks the question "Why should the major portion of the cost of educating potential migrants be borne by the local taxpayers?" This question was answered by P. L. 90-576. Section 123 (a) states:

> No local educational agency which is making a reasonable tax effort, as defined by regulations, will be denied funds for the establishment of new vocational education programs solely because the local educational agency is unable to pay the non-Federal share of the cost of such new programs.

National and local educational agency administrators expect state-level leaders to allocate resources in such a manner as to maximize the benefits of vocational-technical education within their state. Consequently, the state becomes one of the critical levels for evaluation of vocational-technical education. State leaders should attend to the information needs for evaluation at this level.

Criteria for Evaluating Area Vocational-Technical Schools

The 1968 Advisory Council on Vocational Education in their report (12) suggested three major descriptors of area vocational schools: (1) they serve more than one area; (2) they would respond more rapidly to the demands of the labor market, and (3) would experiment more aggressively with new programs.

Swanson (10) recommended that Missouri establish and operate area vocational schools according to the following criteria:

1. The school maintain a minimum enrollment of 300 high school students and a minimum curriculum of ten different vocational programs.

2. It serve an area of not more than 30 miles in radius.

3. It maintain a staff of teachers with extensive occupational experience and adequate training for their assignment.

4. The principal or director be uniquely competent for such an assignment. It is suggested that several of the internships suggested previously be reserved for persons to be assigned to leadership of these schools.

5. The students admitted to area schools provide evidence that they have the ability, the aptitude, and the motivation to succeed in the programs they choose.

6. A student be dropped from the program and returned to the high school in his residential area if his progress is not satisfactory.

7. The school offer post-high school instruction for occupations in which it has adequate facilities and competent staff and develop such facilities and recruit such staff when economic need, sufficient number of students, and lack of such program exist.

8. It offers short-term and part-time instruction for youth and adults already in the labor market under conditions listed in item seven.

Byram (3) raised some questions for guidelines for local evaluation in agriculture which have some application to area schools:

> Has quality control been established for instruction?
> Are students making realistic occupational and educational choices and plans?
> Are students enrolled who have potential for success in the target occupations?
> Do former students have a record of successful employment?

Towards a Tentative Guideline Statement

According to Love (5) the urgent need is for a state master plan for vocational-technical education. This plan should specify program objectives for vocational-technical education within the state. Such objectives should be stated as priorities with sufficient explanation to allow the allocation of resources. This requires state planners to have very particular goals in mind. The state master plan must incorporate the philosophical values of the system and attend to the various "publics" of vocational-technical education.

Carefully chosen advisory councils could become the means for developing an initial list of priorities. Members on the council should be selected for their knowledge of vocational-technical education and for their representation of particular groups within the state. This committee should analyze the possible discrepancies between actualities and intentions of state programs and make recommendations within this context. These approaches to vocational-technical planning conform to what Stufflebeam calls context evaluation.

An example of a philosophical value judgment objective in a state master plan could be the goal of full employment for the labor force. To meet this goal, vocational-technical programs should graduate persons who are employable. "Every vocational program," says the 1968 Advisory Committee:

> should be based on a study of employment supply and demand and consideration of student mobility. In practice, data on supply usually are not available; data on demand are unreliable;

> and an implicit assumption appears to be that no graduate of the program will ever leave the school district. . . . Research indicates clearly that the most successful vocational programs are those which assume responsibility for placing their graduates and thus get feedback on their strengths and weaknesses. . . . If the graduate cannot be placed in the field for which he is prepared something is wrong. Acceptance of placement responsibility by vocational educators would provide a built-in test of adequacy and relevance.

A thorough knowledge of labor force mobility can be extremely useful in planning and evaluating vocational-technical programs. Each state should have a technical information system which yields manpower data, both supply and demand, for particular geographic regions of the state. Such a system should extend to regional and national data also. This information can be considered as inputs in this second state of evaluation. Input evaluation deserves attention because serious mistakes in the commitment of resources can be averted in this planning stage.

Questions such as "how many students should be supervised by an instructor" and "what are the costs in equipping a shop with particular equipment" need to be raised by educational planners before the program is initiated.

Resources always are limited. Efficiency is perhaps worthy of consideration in evaluating programs offered in area vocational schools. One of the best measures of efficiency is the rate of return from the investment in vocational education. The rate of return is difficult to obtain; but methods may be available to determine the costs-benefits of vocational education.

The process of determining the costs-benefits in vocational education, necessitates the determining of inputs and outputs of the proposed or existing programs. This can be thought of as a budgetary process. After this is completed, alternatives can be compared to determine which programs give the greatest return to the investment. This process could be used to look at the formulation of a total vocational program or to make decisions pertaining to a particular program.

Beyl (1) points out that new programs in area schools should not be approved if they will dilute an existing program's quality. Input-output relationships should be viewed state-wide and related to total available resources of a state.

Once a program is established a third stage of program evaluation begins. This is process evaluation. Concerns focus on the competency of the teacher and the appropriateness of the equipment to train students for particular occupations. The process of selecting students for particular curricular offerings becomes crucial to the success of the program. The General Aptitude Test Battery (GATB) is an example of a test of student aptitude. Interests tests such as the Kuder and the Strong Vocational Interest Blank may be used for student selection also.

The fourth stage of program evaluation relates to the product of the system. Can the student do what he has been trained to do? How well does he perform on the job? To answer these kinds of questions, a school needs a direct relationship with the industries which employ its graduates. A strong placement program with follow-up is recommended. Records developed from supervision of students on the job and data collected on graduates of vocational-technical programs can be used to generate a set of expectations for future graduates. In other words, information on salary and labor mobility can be used to estimate future labor needs and plan curricular offerings. Also it can be used to budget future expenditures by comparing the cost of a program with its likely return to its graduates and society.

Some may question the process of obtaining salaries of individuals for follow-up records. This is not a necessity, but some method must be derived to obtain salaries of products of vocational education or a cost-benefit analysis is not possible. However, the location of the product can easily be obtained and recorded on follow-up records. This information can be used to assist in determining an equitable funding between local, state, and federal agencies. By obtaining the aggregrate location of products of vocational training, an equation or formula can be derived to determine the returns to each of the agencies financing vocational education and from this an equitable financing arrangement between the participants involved.

Investment in education, vocational or otherwise, can be thought of as an investment in human resources. These human resources are a part of the society. These resources contribute to the tax structure of local, state, and national economies. These persons also contribute to the total economy that surround them. Luther G. Tweeten, Department of Agricultural Economics, Oklahoma State University, estimates that education gives approximately a 16% rate of return on the investment.

Planners of vocational-technical education in agriculture should not expect to have agriculture programs evaluated with criteria different from the rest of vocational-technical education. The major considerations for program development revolve around the process of budgeting and maximizing benefits from limited resources. Agricultural educators must provide concrete evidence of a return on investment. Criteria need not be limited to dollars; they may be expanded to consider other factors such as productive lives and job satisfaction. Agriculture has an important role in the economy of this nation. It is time to get on with the task of specifying it clearly.

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HOW CAN SUPERVISORS AND TEACHER EDUCATORS HELP TEACHERS DEAL WITH THE UNIQUE PROBLEMS OF CURRICULUM AND TEACHING IN AREA SCHOOLS

Paul G. Chastain
State Supervisor of Agricultural Education
State Department of Education
Columbia, South Carolina

To discuss effectively this topic we must first come to an understanding of the purposes, objectives, or reasons for an area vocational school. The area school concept is no more than the extension of the secondary, post-secondary and adult programs beyond a local school district. Some school systems are large enough to support a total program in vocational education, but most area schools are established because local districts are not financially able or the number of students is too small to provide vocational programs to meet the needs of students in the area. Where local schools come together to form an area school, they can broaden and strengthen the vocational offerings.

Many secondary school programs in vocational agriculture have been limited to production agriculture because of our interpretation of the Smith-Hughes Act which had as one of its objectives to train present and prospective farmers for proficiency in farming. The 1963 Vocational Act expanded this concept to include training for job entry employment in agricultural occupations. If vocational agriculture is to meet the objective of the 1968 Vocational Act, then ways and means must be found to offer more occupational programs in agriculture. This can best be done by the establishment of an area school by local school districts pooling their resources, including finance and personnel, so as to provide a wider variety of programs in agriculture. This must be done if the agricultural industry is to keep pace with the growth and expansion of industry.

Local schools must continue to offer all of the vocational programs now being provided. These programs must be up-dated to keep the instructional program abreast with technological changes taking place in agriculture. For area schools to operate effectively and efficiently, there must be a close working relationship between the area school and the feeder schools. This relationship must include student selection, schedule, financing, course offerings, in-service education, teacher selection, clubs, student placement, and work experience for students enrolled. There must be close working relationships among the guidance counselors in area schools and feeder schools and with the personnel managers in business and industries served by the area school.

The course offerings in agriculture in an area vocational school should be determined by a survey which points up the employment needs in agriculture. In most cases programs will be offered to train individuals for job entry in a cluster of agricultural occupations rather than in a specific occupation. For post-high school programs, the instructional program must be more specialized and more in depth for students to succeed in the job in which they are to be employed.

Of all the concerns I have for the success of the area school, these stand out in my mind: the curriculum, the teacher, and the desire by the students. These three will largely determine if the school meets its objective or if the school becomes a dumping ground for all the problem-students in the feeder schools.

Curriculum and curriculum guides are the responsibility of a number of people and must come as a result of a study of all research available on the subject. The local instructor must be in the center of curriculum development. He should, however, involve the research people available to him; the teacher educators who are trained in curriculum development; the area school director; the State Department of Vocational Agricultural Education; curriculum development specialist; guidance counselors; and teachers of agriculture in the feeder schools. It is imperative that the area school not include subjects or skills taught in the agricultural courses in the feeder schools. The area teacher must make full use of the skills mastered by the students before they come to the area centers.

I have real concern about curriculums and curriculum guides used by the teachers of occupational agriculture in area schools. In fact, I have a concern about curriculums and curriculum guides used by any teacher in vocational agriculture. However, I have a much greater concern about how the teacher interprets these guides into good teaching outlines and how well he makes use of the aids available in presenting the subject to students. For too long, we in vocational agriculture have believed that a classroom, a shop poorly equipped, and a few old state and USDA publications make a satisfactory teaching situation. You know and I know that this is not true. The classrooms must be equipped with the latest instructional equipment as well as the latest teaching aids available.

I commend the educational media centers, the agricultural writers, the teacher education departments, and state departments of education for the fine job being done in the preparation of teaching materials. The American Association for Agricultural Engineering and Vocational Agriculture must be included in this commendation. They are providing some excellent materials for use by teachers of agriculture.

One of the greatest roadblocks in agricultural occupations programs, whether in the local department or in the area school, is the supply of qualified instructors. Teachers coming out of our teacher education program in agriculture are simply not qualified in all of the specialized areas of instruction to supply the needs in all of our schools. We can no longer expect a teacher coming out of a production agricultural major in agricultural education to be an expert in agricultural mechanics, agricultural machinery, agricultural chemicals, agricultural sales, ornamental horticulture, and so forth. This is simply impossible.

The teacher education program has done an excellent job in preparing teachers. Regular teachers must have additional training to qualify for the skills necessary to teach one of the agricultural occupations programs such as ornamental horticulture or mechanics. We can find teachers in industry and give them the professional courses necessary to qualify as agriculture teachers of an agricultural occupations program. These teachers can be qualified through summer school and other in-service workshops. Regular teachers can also be qualified in technical agriculture through summer school and other in-service workshops. In all probability, teachers will have to come from both sources if the supply of teachers is available to meet the need. In some cases, teachers can help each other through organized in-service education workshops. Teacher education has a responsibility for training teachers to qualify in instructional programs needed by students enrolled in production as well as agricultural occupational courses. Some of these skills needed can be met at the pre-service level by allowing students to select a minor in a specialized area of agriculture.

Much has been said in the past few years about the Future Farmers of America organization. I will not take time to discuss the pros and cons of the issue since all of you are familiar with the problem of the FFA being booted out of the United States Office of Education. This is a disgrace and should not be permitted. We have some people in positions of leadership today who believe and insist that the FFA should be extended to post-high school training. At this point there seems to be no good reason for extending the FFA to post-high school training as there is no compatibility of objectives for such an organization. The needs of post-high school leadership training can best be met by a state young farmer organization and the current Young Farmer National Institute. The need for FFA leadership training can best be met by the local FFA chapters in the feeder schools. Time will not allow the area vocational school to conduct an effective FFA program. Students enrolled in the area vocational school remain active in all local school activities. This would not only include the FFA, but athletics and other groups in which youths participate.

GUIDELINES FOR SELECTING, RECRUITING, AND PREPARING TEACHERS FOR AREA SCHOOL PROGRAMS IN AGRICULTURE

Gene M. Love, Associate Professor and
Coordinator of Agricultural Education
Department of Practical Arts and Vocational-
Technical Education
University of Missouri
Columbia, Missouri

The basic assumption underlying the guidelines outlined in this paper is that area school programs in agriculture should prepare persons for employment or improve their employment status by providing educational opportunities leading to marketable skills including leadership and human relations competencies, and counsel and place persons in occupations commensurate with their qualifications and needs.

In 1968 there was a shortage of 141 teachers of agriculture in the United States. Another 289 teachers were teaching with temporary or emergency certificates (1). These facts point to a growing problem of major concern to agricultural educators. Where will we find qualified teachers to maintain and to extend programs in agriculture? More specifically, where will we find teachers for area school programs?

As I see the problem, it is one of finding answers to four important questions:

1. What qualifications are desired of area school teachers?
2. What are the available sources of supply of area school teachers?
3. What means do we have of recruiting area school teachers?
4. What means do we have for training area school teachers?

What Qualifications are Desired of Area School Teachers?

There are a number of desirable qualifications of area school teachers which have been mentioned or cited by agricultural educators. The most significant ones are:

1. Occupational experience in an area of specialization.
2. Competence in a subject area.
3. Teaching success in the area of specialization.
4. Knowledge of the relationships between vocational education and other educational programs, between vocational agriculture and

other vocational programs, and between area schools and "feeder" or "sending" schools.

5. Demonstrated abilities in human relations; developing leadership characteristics in people; counseling, guiding, and placing people in occupations commensurate with their interest patterns and educational qualifications; and surveying community needs and designing educational programs to meet these needs.

Agricultural educators are generally agreed on the desirability of the first three qualifications. Most would like for an area school teacher to possess all three qualifications if possible. On the other hand, there probably is no unanimity of feeling concerning the characteristics embodied in the last two qualifications. I think most of us would consider each characteristic desirable if not always necessary.

What Are the Available Sources of Supply of Area School Teachers?

There are at least three fruitful sources of supply of area school teachers. They are:

1. Former successful teachers of agriculture who have left the teaching profession and who have gained management, supervisory, and/or operational experience in an area of specialization.

2. Graduates of other departments in the College of Agriculture who are certified or who are willing to become certified to teach.

3. Experienced, successful teachers of agriculture who have demonstrated teaching competence in an area of specialization.

What Means Do We Have for Recruiting Area School Teachers?

We might be surprised at the number of potentially good area school teachers we could identify in our states using a systematic approach to the problem. We might also be surprised at the number of such persons who would respond favorably to efforts on our part to communicate with them and to inform them of very plausible and financially rewarding employment opportunities in area schools. Likewise, we might be surprised at the number of persons who would be interested in continuing education opportunities designed to prepare them to teach in area schools.

There are a number of approaches we could pursue in recruiting area school teachers. Among them are the following:

1. Systematic efforts by state staffs to develop and maintain a list of potential area school teachers and to regularly communicate

with and inform these men of employment and training opportunities.

2. Selected incentive programs to encourage potential teachers to prepare for employment in area schools. (Examples are sabbatical leaves, graduate assistantships, summer workshops, certification requirements, etc.)

3. Mass media approach to informing college administrators (especially department chairmen in the College of Agriculture), state agricultural officials, agricultural businessmen, and the public in general about the development of area school programs. (Examples would be speeches, brochures, slide series, news articles, and radio and TV programs of an informative nature.)

What Means Do We Have for Training Area School Teachers?

Vocational educators have developed a variety of ways of training or supplementing the training of potential teachers, including area school teachers. The more important of these are listed below:

1. Dual majors for undergraduates enrolled in other departments in the College of Agriculture.

2. Specialization options within agricultural education programs.

3. Internship or externships in areas of specialization.

4. Inservice teacher education courses, workshops, and institutes.

5. Alternative approaches to certification requirements.

6. "New" course offerings in such areas of study as philosophy of practical arts and vocational-technical education, vocational guidance, and administration and supervision of vocational education programs.

Undoubtedly, the best potential means of finding financial support for implementing programs designed to improve the competence of or to increase the availability of area school teachers is Public Law 90-576. Title II, Part F, Section 511, of Public Law 90-576 provides financial opportunities for:

> ". . . experienced vocational educators to spend full-time in advanced study. . . for . . . three years; to . . . up-date the occupational competencies of vocational education teachers through exchange of personnel between vocational education programs and commercial, industrial, or other public or private employment related to the subject matter of vocational education; and to provide programs of inservice teacher education and short-term institution for vocational education personnel (2)."

We should not overlook a chance to lay an earlier foundation for identifying potential teachers among the students in our secondary schools. Title I, Part D, Section 143, of Public Law 90-576 provides financial support:

> ". . . to pay all or part of the costs of (1) planning and developing . . . or (2) establishing, operating, or evaluating exemplary programs or projects designed . . . to broaden occupational aspirations and opportunities for youths . . . which . . . may include . . . programs or projects at the secondary level to motivate and provide pre-professional preparation for potential teachers of vocational education (2)."

Perhaps we should take a greater interest in Future Teachers of America.

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ADULT AND CONTINUING EDUCATION FOR AGRICULTURAL OCCUPATIONS IN AREA SCHOOLS

James J. Albracht
Assistant Professor of Agricultural Education
Kansas State University
Manhattan, Kansas

Continuing education for adults is one of the most important and pressing needs, in our nation today. In 1727, a handful of Benjamin Franklin's friends formed the first adult education group called the Junto. Today, adult education has grown to an enrollment of over 14 million people and is rapidly increasing. From the beginning of our country, farmers have felt the strong desire to improve themselves. There are over 270,000 persons enrolled in adult programs in agricultural education today. The adult in agricultural education can be described as a person who has full-time adult responsibilities, is engaged in an agricultural pursuit, and is currently enrolled in an agricultural program directed by an agricultural instructor.

Although millions of dollars are spent annually for adult education by government agencies, private foundations, farm organizations, and others, many millions of dollars more need to be spent. It is encouraging to observe growth in the interest and participation in adult programs. In my state the number of young farmer classes has increased from 49 classes in 1965-66 to 70 classes in 1967-68. This total is still about one-half of the number which is needed. Advancements in technology in agriculture have made it more and more imperative that adult programs in agriculture be offered for all interested people.

It might be well to ask ourselves why adult education is becoming increasingly important. At the present time 40 per cent of the total enrollment in agricultural education is composed of adults. Most of the adults who are enrolled in adult agricultural programs are in agricultural production courses. However, production programs are only part of the agricultural picture. Adult programs in agricultural business and industry and programs for persons with special needs should be available. Person (l) has reported that benefit - cost analysis studies in Minnesota have indicated that farm business management programs return $4.20 to each enrollee for each $1.00 invested. This study also revealed that a typical farm business management program enrolling 50 farm families will increase gross sales in a community by $173,000. Similar economic returns have been elicited by researchers in other situations. It is apparent that many additional adult programs in agriculture are greatly needed.

Before I begin a discussion of guidelines for the development of adult programs in agriculture, perhaps it would be well to take a look at adult programs which are presently in operation across the nation. In reviewing recent literature and considering the present situation for adult education in Kansas I would suggest that we take a look at adult programs using the following classification system.

Adult Programs Involving a Diversity of Topics for a Short Period of Time

This is probably the most popular adult education program in operation at the present time. In some states these classes are referred to as young farmer classes in agriculture education. The enrollees are usually young men who are vigorous, enthusiastic, and eager for knowledge. In these classes a great number of specialists are used in the instructional program. The success of these classes largely depends upon the enthusiasm of the enrollees for the program. As Jennings (2) stated, "The day is gone when the vocational agriculture teacher teaches an adult course, or even ten per cent of it."

Enrollees in a young farmer class are interested in farming and usually belong to a young farmer organization which is initiated to help further the leadership and social needs of its members. Young farmers' wives organizations are often formed and this further increases enthusiasm for the program. The vocational agricultural teacher's wife often coordinates the activities of the young farmers' wives.

There are some lyceum and chautauqua traits in classes of this type. The resource speakers often come from a considerable distance and usually participate in the program once every two or three years. The group members may not always be young. Add factors such as community service activities, social functions, field trips, panels, tours, an occasional farm instructional visit and you have a perpetuating organization which serves a need.

Adult Programs Involving One Topic Area for a Short Period of Time

Agricultural production classes.--These classes usually involve a program which revolves around an animal or crop enterprise. A systematic depth study is often made of a topic area such as animal nutrition, corn fertilization, turf management, and farm credit. The vocational agriculture teacher or a special instructor usually conducts these classes, and they meet approximately ten times.

Agricultural industry classes.--A systematic program of arc welding is perhaps the most common agricultural industry class. It is usually taught by the vocational agriculture teacher or a special instructor. Usually ten meetings of a two-hour duration are held. Other topics which might be used for this type of class are acetylene welding, tractor maintenance and repair, and electrical controls and motors.

Agricultural business classes.--Dillner (3) of Pennsylvania reported on successful agricultural supply classes. During the first year for this class the group studied "Human Factors in Management." Eighty per cent of the enrollees returned for the second year and chose "Dairy Cattle Nutrition" for their topic. Next year the group has decided to study "Credit Management." Enrollees are owners, managers, and emloyees of agricultural supply businesses. The regular vocational agriculture teacher or a resource person usually teaches these classes.

Adult Programs Involving One Topic Area for an Extended Period

1. Economic Analysis

a. Agricultural records. These classes are sometimes called farm business analysis classes and are usually scheduled to be completed in three years. The first year is usually devoted to the keeping of records, followed by a second year of analyzing the farm business, and the class is completed during a third year by organizing the farm business to meet family goals. It is estimated that in 1968-69 Minnesota will have 90 full-time teachers for these programs. McCormick (4) reports an increase of 70 percent in the annual gross income of farmers in Ohio who were enrolled in farm business analysis programs during the three-year period from 1964-1966.

b. Agricultural enterprise. Witt (5) of Illinois reports on a five-year program for the purpose of studying the economic aspects of corn production. He reports that 15 farmers have just completed the fourth year of a five-year program with a resulting increase in yield from 116 to 157 bushels per acre. The individuals in the group are studying corn production by the use of individual test plots, and they are planning a second five-year program upon completion of the first. There are two teachers in this school, and they are considering offering a new program in soybean production.

2. MDTA Programs

a. Low income farmers. Newell (6) reports on a Manpower Development and Training Act program for low income farmers. He reports that a well trained and experienced instructor, an interested advisory committee, and enrollees who are interested in improvement are the ingredients for an effective program. In Salem, Arkansas a group of low income dairy farmers increased their milk production by 40 per cent during a 52-week period. The farmers made a return of 7.6 per cent on their investment and continued to use the services of agencies such as the Farm Credit and Soil Conservation Services which cooperated in the instructional program for the class.

b. Students with Special Needs. Haynie (7) states that at the A and M and Normal College in Pine Bluff, Arkansas a group of students with a very limited educational background were successfully placed in an agricultural occupation. The instructional program included basic education in communication skills, human relations, and agricultural mathematics. In addition consumer education was included as well as vocational training in the areas of agricultural mechanics, ornamental horticulture, agri-business, auto body repair and painting, auto mechanics, masonry, carpentry, electricity, welding, tailoring, practical wiring, and secretarial help. This program was part of the manpower work incentive program.

Guidelines for the Development of Adult Programs

After considering the increasing need for adult education programs in agriculture, and after reviewing the many successful programs which are in operation at the present time the following guidelines are advanced for consideration:

1. Determining need, objectives, and philosophy

    a. In an agricultural community, people of all ages can profit from courses in agricultural education. The area vocational school can and should help meet this need.

    b. Community needs vary.

    c. A school system employing a teacher of agriculture for all-day students also has a need for young and adult programs.

    d. School administrators, boards of education, and advisory committees should help to determine needs.

    e. Agricultural industries can assist in determining needs for the off-farm occupations.

    f. The local teacher(s) of agriculture must assume leadership in determining needs.

    g. There are many needs. Priorities should be established.

    h. Schools have an obligation to carry out the intent of the various vocational acts.

2. Instructional personnel

    a. Adequate teachers and teachers' time must be provided to offer continuing educational programs. Multi-teacher departments may be necessary to accomplish this program.

    b. Qualified staff members should be hired for specialized instruction.

    c. A member of the area vocational school staff could coordinate the young and adult program in the geographical area served by the vocational school.

    d. Pre-service and in-service programs are needed to prepare teachers for young and adult classes.

3. Coordination of effort with other agricultural agencies

    a. Duplication of effort should be avoided.

    b. Cooperation and communication are essential.

    c. If sufficient enrollment can be secured, classes should be held in the various cooperating schools. This would help to decrease driving distance of class members.

4. Financing

    a. All programs should be adequately financed from local, state, or federal sources.

    b. Agricultural businesses may be one source of local financial help.

    c. It may be necessary for students to pay for specialized services such as processing records for their own businesses.

5. Group organization

    a. Young and adult agriculturist organizations at local and state level help to improve the instructional program.

    b. Activities of these organizations should be of an educational nature.

6. Curriculum and teaching aids

    a. Long-range planning should be used whenever possible in planning the program.

    b. Business establishments and governmental agencies should be visited regarding the availability of specialists and teaching aids.

    c. Movies, slide films, and special curricular activities should be scheduled well in advance of the course.

    d. Consultant help should be used in the development of the course.

    e. Class members should help determine class objectives.

    f. Demonstrations, panels, tours, field trips, and group discussion should be included in the instructional program.

    g. Instructional content should be organized on a seasonal basis.

   h. Class members should be involved in and help conduct the instructional program.

   i. Actual local problems of the class members should be used as a basis for the instructional program.

7. Facilities and equipment

   a. Physical facilities should be comfortable and provide for an informal atmosphere.

   b. A survey of all of the facilities and equipment in the community should be made regarding availability for the local programs.

   c. Facilities should be available for young farmers' wives.

8. Evaluation

   a. Evaluation should be based upon educational objectives. The progress toward the achievement of the objectives should be easily measured by the use of objective criteria.

   b. Educational objectives should be set by analyzing the local situation and needs, analyzing available standards based upon records obtained by testing associations or by experimental results, and by deciding upon desirable changes in the behavior of class members.

   c. Instructors, class members, and advisory committee members should be involved in evaluating the program.

9. Organization

   a. Promotion

      (1) Administrative approval and support of adult education programs should be secured.

      (2) Local news media should be used to carry announcements of class activities.

      (3) Prospective members should be visited on the farm to help obtain their support of the program.

      (4) Community service activities are beneficial in the promotion of local programs.

b. Recruitment

(1) Local officers, class members, and membership committees are helpful in securing members.

(2) Young farmer orientation programs for high school boys should be used.

(3) Class members of neighboring classes can assist in starting new adult education programs.

c. Scheduling

(1) Class time

(a) Conflict with day school programs should be avoided.

(b) Class activities should be coordinated with the activities sponsored by other local agencies.

(2) Centers and sub-centers

(a) A central location for large class meetings is recommended.

(b) Some meetings may be more efficiently held in the local schools.

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4. McCormic, Floyd G. "Dollars Count in Assessing the Effectiveness of Adult Education," Agricultural Education Magazine, June, 1968, 40:12, pp. 280-281.

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APPENDIX C

SEMINAR AND CONFERENCE PROGRAMS

A NATIONAL SEMINAR

AGRICULTURAL OCCUPATIONS PROGRAM DEVELOPMENT IN AREA VOCATIONAL SCHOOLS

September 15-20, 1968
Bowling Green State University
Bowling Green, Ohio

Cooperatively sponsored by

Bureau of Research
U. S. Office of Education
Washington, D. C.

The Department of Agricultural Education
College of Agriculture and Home Economics
The Ohio State University
Columbus, Ohio

The Division of Agricultural Education
State Department of Education
Columbus, Ohio

DAILY SEMINAR SCHEDULE

Sunday, September 15, 1968

1:00 p.m. to 5:30 p.m. Registration — Alumni Room, University Union

Gilbert S. Guiler, Associate Professor, Department of Agricultural Education, The Ohio State University

6:00 p.m. Dinner — Pheasant Room, University Union

Toastmaster — Richard L. Hummel, Assistant Supervisor, Division of Agricultural Education, Ohio State Department of Education

Introduction and Welcome — Ralph E. Bender, Chairman, Department of Agricultural Education, The Ohio State University

Local Features and Arrangements — J. Richard Bryson, Coordinator of Conferences, Bowling Green State University

Seminar Preview — James E. Dougan, Supervisor, Division of Agricultural Education, Ohio State Department of Education

Monday, September 16, 1968

Chairman for morning sessions: Ralph E. Bender, Chairman, Department of Agricultural Education, The Ohio State University

8:30 a.m. Session 1 — Orientation and Foundations for the Seminar

"Why Are We Here?" — Homer E. Edwards, Regional Officer, Chicago Office, U.S. Office of Education

"Some Objectives of This Seminar" — Ralph J. Woodin, Professor, Department of Agricultural Education, The Ohio State University

"A Rationale for Area Vocational Centers" — R. D. Anderson, Former State Director of Agricultural Education, South Carolina State Department of Education

"Ohio's Justification for Area Vocational Centers" — Byrl R. Shoemaker, Director of Vocational Education, Ohio State Department of Education

10:00 a.m. Questioning Period

10:15 a.m. Coffee Break

10:30 a.m. Session 2 — A Symposium

"Resources for Area Vocational Centers" — William L. Ramsey, Superintendent, Penta County Joint Vocational Center, Perrysburg, Ohio

Symposium Members:

P. G. Chastain, Symposium Chairman, Supervisor of Agricultural Education, South Carolina State Department of Education

James E. McDonald, Superintendent of the Southeastern School Corporation, Walton, Indiana

B. M. Dillard, Assistant Supervisor of Agricultural Education, Georgia State Department of Education

Earl M. Price, Assistant Supervisor of Agricultural Education, North Carolina State Department of Public Instruction

Chairman for afternoon sessions: Dale C. Aebischer, Supervisor of Agricultural Education, Wisconsin Department of Education

1:15 p.m. Session 3 — A Discussion Panel

"Determining the Need for Agricultural Education in Area Centers" — Harold L. Noakes, Supervisor of Agricultural Education, New York State Department of Education

James Albracht, Panel Chairman, In-service Teacher Trainer, Department of Agricultural Education, Kansas State University

Panel Members:

E. W. Kavanagh, Superintendent of Greene County Joint Vocational School, Xenia, Ohio

David B. Jameson, Director, Lawrence County Area Vocational-Technical School, New Castle, Pennsylvania

Robert L. Kelley, Assistant Supervisor of Agricultural Education, Kentucky State Department of Education

2:45 p.m. Coffee Break

3:00 p.m. Session 4 — Task Force Organization

"Organizing for Action" — Gilbert S. Guiler, Associate Professor, Department of Agricultural Education, The Ohio State University

3:20 p.m. to 4:30 p.m. First Meeting of Task Forces

6:00 p.m. Dinner — University Union

7:30 p.m. to 9:00 p.m. Task Force Meetings

Tuesday, September 17, 1968

Chairman for morning sessions: James Wall, Executive Secretary, NVATA, Lincoln Nebraska

8:30 a.m. "The Role of Vocational Supervisors in Planning Area Programs" — James E. Dougan, Supervisor, Division of Agricultural Education, Ohio State Department of Education

9:00 a.m. Session 5 — A Problem Solving Discussion

"Initial Coordination of Area School Agricultural Programs with Other Programs of Agricultural Education"

Welch Barnett, Panel Chairman, Assistant Supervisor, Division of Agricultural Education, Ohio State Department of Education

Discussants:

Howard Sidney, Cobleskill Technical Institute, Cobleskill, New York

Walker Huffman, Superintendent of Muskingum Area Joint Vocational School, Zanesville, Ohio

Asa Tom, County Superintendent, Muskingum County, Ohio, Zanesville, Ohio

Homer Burt, Director, Muskingum Area Joint Vocational School, Zanesville, Ohio

10:15 a.m. Coffee Break

10:30 a.m. Session 6 — A Fact Finding Panel

"Choosing Appropriate Curricular Offerings in Agriculture" — William L. Hull, Assistant Professor, Department of Agricultural Education, Oklahoma State University

Glen R. Boling, Panel Chairman, "Production Agriculture Courses," Supervisor of Agricultural Education, Wayne County Joint Vocational School, Wooster, Ohio

"Agricultural Education for the Disadvantaged" — David Colville, Coordinator, Penta County Joint Vocational Center, Perrysburg, Ohio

"Courses in Off-Farm Agricultural Occupations" — Gene M. Love, Assistant Professor, Department of Agricultural Education, University of Missouri

12:00 Lunch

Chairman for afternoon sessions: J. R. Peddicord, Supervisor of Agricultural Education, Nevada Department of Education

1:15 p.m. Session 7 — An Experience Sharing Symposium

"Facilities and Equipment Essential to Successful Agricultural Programs in Area Schools" — C. M. Lawrence, Supervisor of Agricultural Education, Florida State Department of Education

Monty E. Multanen, Symposium Chairman, Supervisor of Agricultural Education, Oregon State Department of Education

Symposium Members:

Everett E. Nicklow, Supervisor of Agricultural Education, Somerset, Pennsylvania

U. Lewis Eggenberger, Assistant Teacher Trainer, Department of Agricultural Education, Texas Technical College, Lubbock, Texas

Kenneth Parker, Teacher of Vocational Horticulture, West Technical High School, Cleveland, Ohio

2:45 p.m. Coffe Break

3:00 p.m. Plans for a tour of Vocational Centers — Richard L. Hummel, Assistant Supervisor, Division of Agricultural Education, Ohio State Department of Education

3:15 p.m. to 4:30 p.m. Second Task Force Session

7:30 p.m. Coffee Hour — Trout Dining Room, University Union — Gilbert S. Guiler, Associate Professor, Department of Agricultural Education, The Ohio State University

Wednesday, September 18, 1968

Chairman: Richard L. Hummel, Assistant Supervisor, Division of Agricultural Education, Ohio Department of Education

Visits to Area Vocational Centers

7:45 a.m. Assemble at Holiday Inn

8:30 a.m. Vanguard Vocational School, Fremont, Ohio
Ray W. Klay, Superintendent
William Broderick, Director
V. L. McCraw, Agricultural Supervisor

10:30 a.m. EHOVE Vocational School, Milan, Ohio
Creighton Ghrist, Superintendent
Ronald L. Foreman, Director

1:00 p.m. Penta County Vocational and Technical Center, Perrysburg, Ohio
Paul Apple, Director
James L. Pease, Agricultural Supervisor

4:30 p.m. Arrive at Bowling Green

6:30 p.m. Dinner — University Union

Thursday, September 19, 1968

Chairman of morning sessions: Harold Shoaf, Assistant Supervisor of Agricultural Education, Kansas State Board for Vocational Education

8:30 a.m. Session 8 — A Reaction Panel

Presentation 1:

"Post High School Adult and Young Farmer Education in Area Schools" — C. W. Dalbey, Chief of Agricultural Education, Iowa State Department of Public Instruction

Presentation 2:

"Guidance in the Area School Community" — Charles E. Weaver, Supervisor, Guidance and Testing, Columbus, Ohio

James L. Pease, Reaction Panel Chairman, Agricultural Supervisor, Penta County Joint Vocational Center, Perrysburg, Ohio

Louise Fought, Guidance Counselor, Penta County Joint Vocational Center, Perrysburg, Ohio

Wallace Hoyt, Maumee Senior High School, Maumee, Ohio

Ray Goeischius, Guidance Counselor, Woodmore High School, Elmore, Ohio

10:00 a.m. Coffee Break

10:30 a.m. Session 9 — A How To Do It Symposium

"Determining the Course Content of Agricultural Programs" — Symposium Chairman, Darrell L. Parks, Assistant Supervisor, Division of Agricultural Education, Ohio State Department of Education

Agricultural Mechanics — Ralph J. Alexander, Teacher of Vocational Agriculture, Macon, Ohio

Agricultural Business and Service — Harry E. Plank, Penta County Joint Vocational Center, Perrysburg, Ohio

Ornamental Horticulture — Robert W. Harrison, Assistant Supervisor of Agricultural Education, Pennsylvania State Department of Education

Resource, Conservation and Forestry — Charles C. Coyle, Teacher of Vocational Agriculture, Zanesville, Ohio

Farm Business Planning and Analysis — Edward C. Hartog, Department of Agricultural Education, University of Minnesota

12:00 Lunch

Chairman for afternoon sessions: Percy Kirk, State Director of Agricultural Education, Wyoming Department of Education

1:15 p.m. Session 10 — An Alternative Exploration Symposium

"Some Proposals for Providing Faculty for Agricultural Education in Area Schools" — Ralph E. Bender, Chairman, Department of Agricultural Education, The Ohio State University

Charles SaLoutos, Symposium Chairman, Assistant Professor, Department of Agricultural Education, Wisconsin State University

In-service Education for Experienced Vocational Agriculture Teachers — Lowery H. Davis, Chairman, Department of Agricultural Education, Clemson University

In-service Education for the Technically Prepared Teacher — James C. Fink, Supervisor of Agricultural Education, Pennsylvania State Department of Education

Undergraduate Programs for Meeting the Long-Time Demand — Floyd Cox, Teacher Trainer, Department of Agricultural Education, University of Kentucky

2:45 p.m. Coffee Break

3:00 p.m. to 4:30 p.m. Task Force Meeting for Developing Recommendations

6:30 p.m. Banquet — Trout Dining Room

Invocation

Dinner

Toastmaster — Darrell L. Parks, Assistant Supervisor, Division of Agricultural Education, Ohio State Department of Education

Introductions

Musical Entertainment

"Administrative Patterns for Vocational Education Compatible with Secondary Education" — Dean Theodore J. Jensen

Friday, September 20, 1968

Chairman: Julian M. Carter, State Consultant of Agricultural Education, Vermont Department of Education

8:30 a.m. Session 11 — A Speaker-Panel Audience Discussion

"Occupational Experience for Students in Area Vocational Schools" — Speaker, Clarence E. Bundy, Professor, Department of Agricultural Education, Iowa State University

Panel Topic:

"Opportunities for Occupational Experience" —

Harold Shoaf, Panel Chairman, Assistant Supervisor of Agricultural Education, Kansas State Board for Vocational Education

Ornamental Horticulture — Karle A. Lucal, Teacher of Vocational Horticulture, Penta County Joint Vocational Center, Perrysburg, Ohio

Agricultural Business and Service — George Greenleaf, Executive Secretary, Ohio Grain, Feed and Fertilizer Dealers' Assocation

Agricultural Mechanics — Fred Hileman, Deere and Company, Moline, Illinois

10:15 a.m. Coffee Break

10:30 a.m. Session 12 — An Evaluation

"Evaluating Agricultural Education Programs in the Area School Community" — Doyle E. Beyl, Supervisor of Adult Education, Wisconsin State Board for Vocational, Technical and Adult Education

"Organizing Advisory Committees" — Robert V. Kerwood, Co-ordinator of Occupational Education, Pima College, Tucson, Arizona

"Evaluation of Programs by Advisory Groups" — Texton R. Miller, Department of Agricultural Education, North Carolina State University

"Evaluation of the Seminar" — Ralph J. Woodin, Professor, Department of Agricultural Education, The Ohio State University

12:00 Adjournment and Lunch

Task Force Organization for the Seminar

Each participant was assigned to one of the following nine task forces. Each Task Force was composed of approximately ten participants and the consultant listed for each Task Force. Task Forces made recommendations concerning their aspect of agricultural occupations programs in area vocational centers.

Task Force 1: "Need for Agriculture in the Area Vocational School" — R. D. Anderson, Former State Director of Agricultural Education, South Carolina State Department of Education

Task Force 2: "Coordinating the Area Agriculture Program with Other Agricultural Education Programs" — William L. Ramsey, Superintendent, Penta County Joint Vocational Center, Perrysburg, Ohio

Task Force 3: "Selecting Agricultural Occupations, Curriculums and Courses" — Harold L. Noakes, Supervisor of Agricultural Education, New York State Department of Education

Task Force 4: "Guidance of Area School Students Including Follow-up and Placement" — Charles E. Weaver, Supervisor, Guidance and Testing, Columbus, Ohio

Task Force 5: "Facilities and Equipment for Agriculture in Area Vocational Schools" — C. M. Lawrence, Supervisor of Agricultural Education, Florida State Department of Education

Task Force 6: "Selection of Area School Personnel for Agriculture Programs" — William L. Hull, Associate Professor, Department of Agricultural Education, Oklahoma State University

Task Force 7: "Providing Occupational Experience for Agricultural Occupations in the Area Vocational-Technical School" — Clarence E. Bundy, Professor, Department of Agricultural Education, Iowa State University

Task Force 8: "Evaluation of Agriculture Programs in Area Vocational Schools" — Doyle E. Beyl, Supervisor of Adult Education, Wisconsin State Board for Vocational, Technical and Adult Education

Task Force 9: "Post High School Young and Adult Farmer Programs in Area Vocational Schools" — C. W. Dalbey, Chief of Agricultural Education, Iowa State Department of Public Instruction

PROGRAM CONFERENCE ON AGRICULTURAL EDUCATION IN AREA VOCATIONAL SCHOOLS

Agricultural Administration Building
The Ohio State University
March 17-18, 1969

Sunday, March 16, 1969

6:00 p.m. Registration — The Archer House

6:30 p.m. Orientation Dinner — Ohio Union (Terrace Room)

Welcome and Introduction — Dr. Ralph E. Bender, Chairman, Department of Agricultural Education, The Ohio State University

"Our Need for Guidelines for Establishing and Promoting Agricultural Education Programs in Area Schools" — James E. Dougan, State Supervisor of Agricultural Education, Ohio

Monday, March 17, 1969

8:30 a.m. Meet in the Agricultural Administration Building - Room 246

"Implications of the Bowling Green Conference" — J. Robert Warmbrod, Teacher Education, The Ohio State University, and Darrell L. Parks, Assistant Supervisor, Ohio Department of Agricultural Education

"Organization of Conference for Writing Guidelines for Area Programs in Agricultural Education" — Ralph J. Woodin, Teacher Education, The Ohio State University

9:30 a.m. Coffee Break

9:45 a.m. Committee Meetings

12:00 Lunch — Ohio Union (Terrace Dining Room)

1:15 p.m. Discussion of Committee Progress and Problems - Room 246, Agricultural Administration Building

3:00 p.m. Coffee Break

3:30 p.m. Committee Meetings

7:00 p.m. Optional Committee Meetings

Tuesday, March 18, 1969

8:30 a.m. Committee Meetings

10:00 a.m. Group Meeting - Room 206, Agricultural Administration Building
Final Report by each Committee Chairman

12:00 Adjournment

Guideline Writing Committees

Each consultant and participant attending the follow-up conference was assigned to one of the following committees. The guidelines developed by these committees summarize the major recommendations of the National Seminar on Agricultural Occupations Program Development in Area Schools.

Committee 1: How to Appraise the Needs and Resources for Area Schools in Specific Communities

Committee 2: What Planning Procedures Should Be Followed in Developing State Programs of Area Schools Development

Committee 3: How Should State Leaders Bring About Coordination and Articulation Between the Area Schools and Member Schools

Committee 4: What Criteria are Needed for Evaluating Area Schools and What Data Should be Collected to Further Evaluations

Committee 5: How Can Supervisors and Teacher Educators Help Teachers to Deal with the Unique Problems of Curriculum and Teaching in Area Schools

Committee 6: What Should Be Done to Prepare, Recruit and Select Teachers for Area Schools

Committee 7: Adult and Continuing Education for Agricultural Occupations in Area Schools

APPENDIX D

CONSULTANTS AND PARTICIPANTS

A NATIONAL SEMINAR

AGRICULTURAL OCCUPATIONS PROGRAM DEVELOPMENT IN AREA VOCATIONAL SCHOOLS

September 15-20, 1968

Consultants

R. D. Anderson
Former State Director of
Agricultural Education
South Carolina State
Department of Education
Columbia, South Carolina 29201

Doyle E. Beyl, Supervisor
Vocational Agriculture
State Board of Vocational,
Technical and Adult Education
137 East Wilson Street
Madison, Wisconsin 53703

Clarence E. Bundy, Professor
Agricultural Education
Iowa State University
Ames, Iowa 50010

C. W. Dalbey
Chief of Agricultural Education
Iowa Department of Public
Instruction
Des Moines, Iowa

William H. Hull, Associate
Professor
Agricultural Education
Oklahoma State University
Stillwater, Oklahoma 74074

C. M. Lawrence, Director
Agricultural Education
State Department of Education
Tallahassee, Florida 32304

Harold L. Noakes, Chief
Bureau of Agricultural Education
State Education Department
Albany, New York 12224

William L. Ramsey, Director
Milwaukee Technical College
1015 North Sixth Street
Milwaukee, Wisconsin 53203

Charles E. Weaver, State
Supervisor
Guidance Services Section
Ohio Department of Education
751 Northwest Boulevard
Columbus, Ohio 43212

Participants

James Albracht
Kansas State University
Manhattan, Kansas 66502

Basil C. Ashcraft
Acting Supervisor
Agricultural Education
Department of Public
Instruction
Helena, Montana 59601

Don Baustian
Agricultural Supervisor
Muskingum Area Joint
Vocational School and
Technical Institute
400 Richards Road
Zanesville, Ohio 43701

T. O. Beach
County Coordinator
Vocational-Technical
Education
3100 'Avenue "A"
Yuma, Arizona 85364

Glen R. Boling, Supervisor
Vocational Agriculture
Wayne County Joint Vocational School
Box 378
Smithville, Ohio 44677

Melvin Briley
Assistant Director
Southeast Kansas Area
Vocational-Technical School
Columbus, Kansas 66725

Lewis Brinson, Director
Ben Hill-Irwin Area
Vocational-Technical School
Box 2
Ocilla, Georgia

Aubrey M. Briscoe, Director
Technical Agricultural Programs
Northwest Mississippi Junior College
Post Office Box 24
Senatobia, Mississippi 38668

Einar Brosten, Assistant
Director
Helena Vocational Technical
School
Helena, Montana 59601

Donald D. Brown
Central District Supervisor
State Department of Vocational-
Technical Education
1515 West Sixth Avenue
Stillwater, Oklahoma 74074

Lloyd Brownsworth
Assistant Director-Counselor
O. T. Autry Area Vocational-
Technical Center
1201 West Willow
Enid, Oklahoma 73701

Earl T. Carpenter
Associate Professor
Agricultural Education
Clemson University
Clemson, South Carolina 29631

Julian M. Carter, State Consultant
Vocational Agriculture
5th Floor, State Office Building
Montpelier, Vermont 05602

P. G. Chastain, State Supervisor
Vocational Agricultural Education
State Department of Education
910 Rutledge Building
Columbia, South Carolina 21201

James H. Copenhaver, Assistant
Supervisor
Agricultural Education
State Department of Education
210 Crowell Building
Pulaski, Virginia 24301

Floyd Cox
College of Education
University of Kentucky
Lexington, Kentucky 40506

Lionel E. Cross
Supervisor of Industrial Arts and
Agriculture
San Jose Unified School District
1605 Park Avenue
San Joe, California 95114

John M. Cummings, Director
Area Vocational Schools Branch
Department of Education
225 West State Street
Trenton, New Jersey 08625

Lowery H. Davis
Head and Professor
Agricultural Education
Clemson, South Carolina 29631

B. M. Dillard
Coordinator of Forestry Program
258 State Office Building
Atlanta, Georgia 30334

Floyd J. Doering, Supervisor
Agricultural Education
State Department of
Public Instruction
126 Langdon Street
Madison, Wisconsin 53702

Winston H. Dolve
Assistant State Supervisor
North Dakota State University
Agricultural Education
Department
Fargo, North Dakota 58102

Homer E. Edwards
Vocational and Technical
Education Program Officer
Office of Education, DHEW
226 West Jackson Boulevard,
Room 404
Chicago, Illinois 60606

Lewis Eggenberger, Associate
Professor
Agricultural Education
Department
Texas Technological College
Lubbock, Texas 79409

John Ferguson, Director
Agricultural Education Program
Clackamas High School
13801 S. E. Webster Road
Milwaukie, Oregon 97222

James C. Fink, State Supervisor
Agricultural Education
Department of Public Instruction
Harrisburg, Pennsylvania 17126

Robert Ford, Consultant
State Department of Public
Instruction
State Office Building
Des Moines, Iowa 50319

Richard L. Gavin
County Coordinator of Agricultural Education
Polk County Board of
Public Instruction
Bartow, Florida 33830

E. D. Graf, Assistant Chief
Bureau of Agricultural Education
California Department of
Education
721 Capitol Mall, Room 413
Sacramento, California 95824

Howard W. Green, Specialist
Agribusiness and Continuing
Education
Alabama State Department
of Education
105 Thach Hall
Auburn, Alabama 36830

Orley Gunderson
Instructor and Department Head
Willmar Area Vocational-
Technical School
301 North 17th
Willmar, Minnesota 56201

Jerry J. Halterman, Director
Designate
OSU Technical Institute
204 Agricultural Administration Building
2120 Fyffe Road
Columbus, Ohio 43210

Gerald L. Hamilton
Teacher of Vocational Agriculture
Petoskey Area Vocational Center
Petoskey, Michigan 49770

William H. Hamilton
Assistant Professor
Agricultural Education
Purdue University
Lafayette, Indiana 47907

J. A. Harris, Director
Pickens County Area Vocational-Technical School
Jasper, Georgia 30143

Robert W. Harrison
Area Agricultural Education Adviser
Administration Building
Doylestown, Pennsylvania 18901

Edward C. Hartog, Research Fellow
Agricultural Education Department
University of Minnesota
St. Paul, Minnesota 55101

Robert L. Hayward
Assistant Director
Agricultural Education
State Department of Education
Jefferson City, Missouri 65101

Leo P. Herndon, Associate Professor
Agricultural Education and Agricultural Mechanics
Reno, Nevada 89507

Glenn W. Hetzel, Instructor
Agricultural Engineering
Virginia Polytechnic Institute
Blacksburg, Virginia 24061

David Jameson, Director
Lawrence County Area
Vocational-Technical School
750 Wood Street
New Castle, Pennsylvania 16101

Gary Jarmer
Production Agriculture Instructor
North Central Kansas Area Vocational-Technical School
114 North Hersey
Beloit, Kansas 67420

William R. Jeffries, Consultant
Post-High School Programs in
Agricultural Education
State Department of Education
Room 275, Knott Building
Tallahassee, Florida 32304

Carlton E. Johnson, Professor
Department of Agricultural Engineering
The Ohio State University
2703 Neil Avenue
Columbus, Ohio 43210

Richard Karelse, Consultant
Michigan Department of Education
Division of Vocational Education
115 West Allegan
Lansing, Michigan 48917

Robert L. Kelley
Assistant Director
Agricultural Education
State Department of Education
State Office Building
Frankfort, Kentucky 40601

Robert V. Kerwood
Coordinator of Occupational Education
Pima College
201 North Stone Avenue, Suite 218
Tucson, Arizona 85701

Percy Kirk, State Director
Agricultural Education
Education Department
Capitol Building
Cheyenne, Wyoming 82001

Roger W. Lawrence, Department Head
Regional Vocational Agriculture Center
Woodrow Wilson High School
Middletown, Connecticut 06457

Gene M. Love
Associate Professor and Chairman
University of Missouri
122 Waters Hall
Columbia, Missouri 65201

Carter Luther
Vocational Agriculture Instructor
Jerome High School
510 East Avenue D
Jerome, Idaho 83338

Elwood Mabon, Consultant
Agricultural Education
Department of Public Instruction
Grimes State Office Building
Des Moines, Iowa 50319

J. A. Marshall, Assistant Director
Agricultural Education
Texas Education Agency
Austin, Texas 78711

Robert C. Mason, Coordinator
Farm and Ranch Operators
Short Course
University of Nebraska
302 Ag Hall
Lincoln, Nebraska 68503

Gerald R. Matteson, Assistant
Professor
Department of Agricultural Education
Wisconsin State University-River Falls
River Falls, Wisconsin 54022

Hugh P. McClimon
Assistant State Supervisor
Agricultural Education and
Agricultural Occupations
State Department of Education
Anderson, South Carolina 29621

Virgil McCraw
Agriculture Supervisor
Vanguard Vocational Center
1306 Cedar Street
Fremont, Ohio 43420

James E. McDonald
Vocational Director
Southeastern School
Corporation
Walton, Indiana 46994

Elmer Miller
Supervisor of Correspondence
Study
University of Nebraska
Lincoln, Nebraska

Texton R. Miller, Associate
Professor
North Carolina State University
121 Tompkins Hall
Raleigh, North Carolina 27607

Monty E. Multanen, State
Supervisor
Agricultural Education
State Department of Education
305 Public Service Building
Salem, Oregon 97310

Everett E. Nicklow, Director
Somerset County Area
Vocational-Technical School
Box 31
Somerset, Pennsylvania 15501

J. W. Owens, Director
Agricultural Technology
Utica Junior College
Utica, Mississippi 39175

James L. Pease
Supervisor/Dean
Agricultural Education
Penta County Vocational School
and Technical College
Perrysburg, Ohio 43531

J. R. Peddicord, Supervisor
Agricultural Education
State Department of Education
Carson City, Nevada 89701

Don E. Pennington
Assistant State Supervisor
Agricultural Education
Division of Vocational Education
309 West Washington Street
Indianapolis, Indiana 46204

E. M. Price, Associate
Supervisor
Agricultural Education
Department of Public
Instruction
Raleigh, North Carolina 27602

Ronald D. Regan
Supervisor of Agricultural
Education
Los Angeles Unified School
District
Post Office Box 3307
Terminal Annex
Los Angeles, California 90054

George A. Richter, Supervisor
Agricultural Education
Vocational and Technical Division
Board of Vocational Education and
Rehabilitation
405 Centennial Building
Springfield, Illinois 62706

Charles SaLoutos, Assistant
Professor
Agricultural Education
Wisconsin State University-
Platteville
Pine Street
Platteville, Wisconsin 53818

Richard W. Schmidt
Assistant-Teacher Education
Oregon State University
Extension Hall
Oregon State University
Corvallis, Oregon 97330

Larry Selland, Supervisor
Agri-Business Programs
North Dakota Vocational Education Department
303 Capitol Avenue
Bismarck, North Dakota 58501

Harold J. Shoaf
Assistant State Supervisor
Agricultural Education
State Board for Vocational Education
State Office Building
Topeka, Kansas 66612

Howard Sidney, Chairman
Agricultural Division
Agricultural and Technical
College
Cobleskill, New York 12043

Dewey Skelton, Assistant Director
Missoula Technical Center
South Avenue and Middlesex
Missoula, Montana 59801

Harold W. Sullivan, Program
Specialist
Vocational Agriculture
West Virginia Board of Education
Capitol Building, E 208
Charleston, West Virginia 25305

John W. Shurra
Associate in Vocational Curriculum
State Education Department
Albany, New York 12224

John D. Sweeney, Supervisor
Vocational Education
Board of Vocational Education
and Rehabilitation
405 Centennial Building
Springfield, Illinois 62706

John D. Todd, Assistant Professor
Agricultural Education
University of Tennessee
308 Morgan Hall
Knoxville, Tennessee 37916

Bill T. Tomlinson
Subject Matter Specialist
Agricultural Education Department
Texas A & M University
College Station, Texas 77843

Jack C. Treloar, Jr., Head
Agriculture Department
Hinds Junior College
Box 54
Raymond, Mississippi 39154

William Wakefield
Intern in Agricultural Education
State Education Department
Albany, New York 12224

James Wall, Executive Secretary
National Vocational Agricultural
Teachers Association
Box 4498
Lincoln, Nebraska 68504

Richard F. Welton
Vocational Agriculture Instructor
Eaton High School
Box 247
Eaton, Colorado 80615

John A. Wilson
Agriculture Supervisor
Four County Joint Vocational School
101 Depot Street
Archbold, Ohio 43502

CONFERENCE ON

AGRICULTURAL EDUCATION IN AREA VOCATIONAL SCHOOLS

March 17-18, 1969

Consultants and Participants

James Albracht
Assistant Professor of
Agricultural Education
Kansas State University
Manhattan, Kansas

W. C. Barnett
Supervisor, Agricultural Education
Ohio Department of Education
Columbus, Ohio

Ralph E. Bender
Professor and Chairman
Department of Agricultural Education
The Ohio State University
Columbus, Ohio

Glen Boling, Supervisor
Vocational Agriculture
Wayne County Joint Vocational School
Smithville, Ohio

Aubrey M. Briscoe
Northwest Mississippi
Junior College
Senatobia, Mississippi

Paul G. Chastain
Supervisor, Agricultural
Education
South Carolina Department
of Education
Columbia, South Carolina

C. W. Dalbey, Chief
Agricultural Education
State Department of
Public Instruction
Des Moines, Iowa

James E. Dougan
State Supervisor of Agricultural Education
Ohio Department of
Education
Columbus, Ohio

Richard Edsall
Research Associate
Department of Agricultural
Education
The Ohio State University
Columbus, Ohio

Gilbert S. Guiler
Associate Professor of
Agricultural Education
The Ohio State University
Columbus, Ohio

Glenn W. Hetzel, Instructor
Agricultural Engineering
Virginia Polytechnic
Institute
Blacksburg, Virginia

Walker Huffman, Superintendent
Muskinghum Area Vocational-
Technical Center
641 Fairmont Avenue
Zanesville, Ohio

William L. Hull
Associate Professor of
Agricultural Education
Oklahoma State University
Stillwater, Oklahoma

Richard Hummel
Supervisor, Agricultural Education
Ohio Department of Education
Columbus, Ohio

Roy W. Klay, Superintendent
Vanguard Vocational School
1306 Cedar Street
Fremont, Ohio

C. M. Lawrence, Director
Agricultural Education
State Department of Education
Tallahassee, Florida

Gene M. Love, Coordinator
Agricultural Education
University of Missouri
Columbia, Missouri

J. A. Marshall
Assistant Director, Agricultural Education
Texas Education Agency
Austin, Texas

Everett E. Nicklow, Director
Somerset County Area
Vocational-Technical School
Somerset, Pennsylvania

Harold L. Noakes, Chief
Agricultural Education
New York State Education Department
Albany, New York

Darrell L. Parks, Supervisor
Agricultural Education
Ohio Department of Education
Columbus, Ohio

James L. Pease, Supervisor
Agricultural Education
Penta County Vocational
School and Technical College
Perrysburg, Ohio

Harold W. Sullivan
Program Specialist
Vocational Agriculture
West Virginia Board of Education
Charleston, West Virginia

John Sweeney
Supervisor, Agriculture Occupations
State Board of Vocational Education
Springfield, Illinois

J. Robert Warmbrod
Professor of Agricultural Education
The Ohio State University
Columbus, Ohio

Ralph J. Woodin
Professor of Agricultural Education
The Ohio State University
Columbus, Ohio

APPENDIX E

LETTERS OF INVITATION

THE OHIO STATE UNIVERSITY
COLUMBUS, OHIO 43210

COLLEGE OF AGRICULTURE AND HOME ECONOMICS
Resident Instruction—Research—Extension

DEPARTMENT OF
AGRICULTURAL EDUCATION
AGRICULTURAL ADMINISTRATION BUILDING
2120 FYFFE ROAD
TELEPHONE 293-6321

April 23, 1968

TO: State Supervisors of Vocational Agriculture

FROM: Ralph E. Bender, Project Director and
James E. Dougan, Co-Director

SUBJECT: National Seminar--"Agricultural Occupations Program Development in Area Vocational Schools"

We are pleased to announce that a National Seminar on Agricultural Occupations Program Development in Area Vocational Schools will be held at Bowling Green State University, Bowling Green, Ohio, during the week of September 16, 1968. This seminar is primarily for state staff members and leaders of area vocational schools interested in the development of expanded and enriched programs of vocational agriculture through area schools with major emphasis at the high school level.

Program Emphasis

The following areas will be emphasized:

(1) A rationale for offering agriculture in the area vocational school.

(2) Articulating the area agriculture program with other agricultural education programs.

(3) Choosing appropriate curricular and course offerings.

(4) Guidance of area school students, including placement and follow-up.

(5) Facilities and equipment needed.

(6) Qualifications and selection of faculty members.

(7) Providing occupational experience.

(8) Evaluation of programs.

Consultants will be available to make presentations and to meet with committees that will develop recommendations for each area of the program. A day will be spent in visiting three area schools that are in operation in Northwestern Ohio. Registration for the seminar will be held Sunday afternoon, September 16, and an orientation dinner will be featured that evening. The seminar will adjourn at 12:00 noon Friday, September 21.

Participants to Be Served

Approximately one hundred persons will be selected from throughout the nation. Through a grant from the U.S. Office of Education to The Ohio State University, each participant will be supported to the extent of $75 for subsistence in addition to travel being paid on the basis of a round trip, air tourist, tax exempt fare. Bowling Green State University is located near Toledo. Air passengers arriving at Toledo will be provided transportation to the seminar location.

In cooperation with your State Director and Head State Teacher Educator(s), please assess the interest and need for this kind of training in your state and nominate from one to four interested participants. Complete the enclosed applications and return by May 20, 1968. The selected participants will be notified by June 15, 1968. Details concerning the program, transportation, and housing facilities will be sent to the selected personnel.

If you have further questions of detail previous to the nomination of personnel, please advise.

REB:cr

Enclosures

cc State Directors of Vocational Education
Head State Teacher Educators in Agricultural Education

APPLICATION
NATIONAL SEMINAR FOR AGRICULTURAL OCCUPATIONS PROGRAM DEVELOPMENT IN AREA VOCATIONAL SCHOOLS

Conducted by The Ohio State University
at Bowling Green State University
September 16 - September 21, 1968

Name of applicant____________________

Business address____________________
Street City

____
State Zip Code Telephone

Name of institution or agency where presently employed____________________

____

Present position title____________________

Present position classification:

( ) State administration
( ) Local or area administration
( ) State supervision
( ) Local or area supervision
( ) Teacher education
( ) Research
( ) Instructional materials or curriculum
( ) Other

Present position duties (emphasis upon interest or responsibility with reference to area school programs)____________________

____

____

Professional education employment record (list more recent experience first):

Position	Institution	State	No. of Years

Formal education (include Ph.D., Master's and Bachelor's degrees; list most recent degree first):

Institution	Degree

Send to: Ralph E. Bender, Project Director
The Ohio State University
2120 Fyffe Road
Columbus, Ohio 43210

THE OHIO STATE UNIVERSITY
COLUMBUS, OHIO 43210

COLLEGE OF AGRICULTURE AND HOME ECONOMICS
Resident Instruction—Research—Extension

DEPARTMENT OF
AGRICULTURAL EDUCATION
AGRICULTURAL ADMINISTRATION BUILDING
2120 FYFFE ROAD
TELEPHONE 293-6321

We are pleased to inform you that you have been accepted as a participant in the National Seminar on Agricultural Occupations Program Development in Area Vocational Schools which will be held at Bowling Green State University, Bowling Green, Ohio. The Seminar will begin with a dinner meeting on Sunday evening, September 15, and adjourn on Friday, September 20, at noon. As announced, we are expected to pay your travel to and from this Seminar at an amount not to exceed a round trip, air tourist, tax exempt rate and $75 for subsistence.

Details concerning your method of travel, time of arrival, and reservations for rooms will be sent to you in a few weeks. In the meantime, it is necessary for us to know whether or not you are accepting this nomination and plan to participate in the Seminar. Therefore, please complete the enclosed postcard and return it to us by July 1, 1968.

Sincerely yours,

Ralph E. Bender, Project Director
Department of Agricultural Education

REB:cr

Enclosure

THE OHIO STATE UNIVERSITY
COLUMBUS, OHIO 43210

COLLEGE OF AGRICULTURE AND HOME ECONOMICS
Resident Instruction—Research—Extension

DEPARTMENT OF
AGRICULTURAL EDUCATION
AGRICULTURAL ADMINISTRATION BUILDING
2120 FYFFE ROAD
TELEPHONE 293-6321

March 3, 1969

TO: Participants in Follow-Up Conference on Agricultural Occupations Program Development in Area Schools

FROM: Ralph E. Bender

We are pleased to know that you are planning to attend our Follow-Up Conference to the National Seminar on Agricultural Occupations Program Development in Area Schools. Our program will begin with a 6:30 pm dinner in Ohio Room A, Student Union Building on the campus. Some of our staff members in agricultural education will meet you at the Archer House lobby at 6:00 on Sunday to take you to the meeting.

I suggest that you take a taxi from the airport to Archer House which is located on the OSU campus at 2130 Neil Avenue where we have reserved a room for you as had been indicated earlier. We are planning to adjourn the meeting promptly at 12:00 on Tuesday, March 18. If possible we will have a check to remunerate you for your travel, lodging, and meal expenses before you leave.

Emphasis in our program will be directed toward the development of guidelines for the promotion and development of area school centers to supplement local schools. Please bring with you any materials that will contribute to this purpose.

REB:cr

APPENDIX F

EVALUATION AND FOLLOW-UP INSTRUMENTS

NATIONAL SEMINAR

AGRICULTURAL OCCUPATIONS PROGRAM DEVELOPMENT IN AREA VOCATIONAL SCHOOLS

Directions. Please place a check mark on each scale to indicate your reaction to each item. You should make only one check mark for each item. React to each item as a discrete item unrelated to the other items.

High										Low
___ +5	___ +4	___ +3	___ +2	___ +1	Content clear to me	___ -1	___ -2	___ -3	___ -4	___ -5
___ +5	___ +4	___ +3	___ +2	___ +1	New ideas to me	___ -1	___ -2	___ -3	___ -4	___ -5
___ +5	___ +4	___ +3	___ +2	___ +1	My participation	___ -1	___ -2	___ -3	___ -4	___ -5
___ +5	___ +4	___ +3	___ +2	___ +1	Usefulness to me	___ -1	___ -2	___ -3	___ -4	___ -5
___ +5	___ +4	___ +3	___ +2	___ +1	Opportunity for my participation	___ -1	___ -2	___ -3	___ -4	___ -5
___ +5	___ +4	___ +3	___ +2	___ +1	Level of group interest	___ -1	___ -2	___ -3	___ -4	___ -5
___ +5	___ +4	___ +3	___ +2	___ +1	Take-home value for me	___ -1	___ -2	___ -3	___ -4	___ -5
___ +5	___ +4	___ +3	___ +2	___ +1	My general reaction	___ -1	___ -2	___ -3	___ -4	___ -5

NATIONAL SEMINAR

AGRICULTURAL OCCUPATIONS PROGRAM DEVELOPMENT IN AREA VOCATIONAL SCHOOLS

Directions. This form has been prepared to get your reactions to the activities, content, and conduct of the seminar. Please be perfectly candid in your responses. For each of the statements below, circle the letter which indicates your agreement or disagreement with the statement according to the following code.

SA = I strongly agree with the statement.
A = I agree moderately with the statement.
? = I am undecided.
D = I disagree moderately with the statement.
SD = I strongly disagree with the statement.

SA A ? D SD 1. The seminar held my interest.

SA A ? D SD 2. The objectives of the seminar were clear to me.

SA A ? D SD 3. Not enough time was provided for task force sessions.

SA A ? D SD 4. The consultants should have contributed more to the task force sessions.

SA A ? D SD 5. The persons who planned the seminar should feel that the objectives of the seminar were accomplished.

SA A ? D SD 6. The recommendations of the task forces will be very valuable in developing agricultural occupations programs in area schools.

SA A ? D SD 7. The objectives of the seminar were not realistic.

SA A ? D SD 8. The seminar was too long.

SA A ? D SD 9. The seminar was very worthwhile.

SA A ? D SD 10. The objectives of the seminar were not the same as my purposes for attending the seminar.

SA A ? D SD 11. There was not enough time for informal discussion during the seminar.

SA A ? D SD 12. I got few new ideas during the seminar which will aid in the development of agricultural occupations programs in area schools.

SA A ? D SD 13. The consultants were stimulating and interesting.

SA A ? D SD 14. The facilities (meeting rooms, etc.) for the seminar were very adequate and contributed to a successful seminar.

SA A ? D SD 15. The content of the seminar program was very appropriate.

SA A ? D SD 16. During the seminar I was stimulated to think about the development of agricultural occupations programs in area schools.

SA A ? D SD 17. The seminar was well organized.

SA A ? D SD 18. The consultants encouraged the development of new viewpoints and ideas.

SA A ? D SD 19. I did not have an opportunity to express my ideas during the seminar.

SA A ? D SD 20. The task force sessions should have been more structured.

SA A ? D SD 21. All participants contributed effectively to the task force sessions.

SA A ? D SD 22. The seminar program should have included more speakers.

SA A ? D SD 23. Too much time of the seminar participants was spent in the evaluation of the seminar.

SA A ? D SD 24. The seminar program was too fixed.

SA A ? D SD 25. The seminar was quite boring.

What do you consider the major strengths of the seminar?

What do you consider the major weaknesses of the seminar?

On the back of this page, please make any additional comments that you feel appropriate about the seminar. Feel free to censure or praise. Try particularly to mention items that have not been dealt with on the evaluation forms.

NATIONAL SEMINAR

AGRICULTURAL OCCUPATIONS PROGRAM DEVELOPMENT IN AREA VOCATIONAL SCHOOLS

Name_______________________________________ **State**_______________________

Position____

Briefly indicate below what you consider the two or three most worthwhile ideas resulting from this seminar that you plan to implement in your state.

NATIONAL SEMINAR ON AGRICULTURAL OCCUPATIONS PROGRAM DEVELOPMENT IN AREA VOCATIONAL SCHOOLS

Department of Agricultural Education
The Ohio State University
Columbus, Ohio 43210

FORM A

ACTIVITIES RELATED TO THE DEVELOPMENT OF AGRICULTURAL OCCUPATIONS PROGRAMS IN AREA SCHOOLS

Name_______________________________________ **State**__________________

Position____

Address____

This schedule is designed to ascertain your activities since attending the seminar that relate to the promotion and development of agricultural occupations programs in area vocational schools. For each question, please check those activities with which you have been involved that reflect your participation in the National Seminar on Agricultural Occupations Program Development in Area Vocational Schools. (Note: Check all items that apply.)

Return to:

J. Robert Warmbrod or Darrell L. Parks
208 Agricultural Administration Building
The Ohio State University
2120 Fyffe Road
Columbus, Ohio 43210

1. In terms of sharing a general overview of the seminar, I have presented or shared formally or informally the major seminar findings with:

_____ Supervisory Staff in Agricultural Education
_____ Supervisory Staff in Vocational Education
_____ Other State Department of Education personnel
_____ Teacher Education Staff in Agricultural Education
_____ Area and local supervisors of Vocational Education
_____ Local school administrators
_____ Vocational Agriculture Teachers
_____ Legislators
_____ Lay citizenry (civic organizations, labor union organizations, community task force groups, etc.)
_____ None of the above
_____ Other (please identify)____
____
____

2. In terms of specific actions that reflect my thinking as a result of participating in the National Seminar, I have assisted with the following, in terms of agricultural education programs in area schools, primarily at the secondary level:

_____ Formulating master state-wide plans for program development and implementation in terms of type and location of programs
_____ Developing standards and criteria for program operation
_____ Planning facilities
_____ Defining student recruitment and guidance procedures
_____ Developing and implementing pre-service and in-service training programs for teachers in area schools
_____ Designing procedural patterns for coordinating area vocational school programs in agricultural education with local vocational agriculture programs
_____ Designing supervisory patterns at both the state and area vocational school levels for agricultural education
_____ Developing state reimbursement patterns for area vocational school programs
_____ Staffing area vocational school positions in agricultural education with qualified, competent personnel
_____ Adjusting certification standards for high skilled, area school teachers
_____ Adjusting and adapting student occupational experience programs and record keeping for those enrolled in area vocational school programs in agricultural education
_____ Placement and follow-up procedures for graduates
_____ Developing instructional materials
_____ Developing promotional literature (brochures, slides, etc.) regarding area school agricultural education programs
_____ Other (please describe)____
____

3. As a means of enhancing my thinking and understanding regarding the further development of secondary level agricultural education programs in area vocational schools since the National Seminar, I have:

    _____ Visited area schools in this state
    _____ Visited area schools in other states
    _____ Attended or assisted in conducting training sessions involving area school program development personnel
    _____ Solicited the services of someone from the USOE or another state to speak or serve as a consultant in the development of area school programs
    _____ Made subsequent use of resource personnel who participated in the National Seminar
    _____ Other (please describe)________________________________
    ____
    ____

4. Participating in the area school seminar:

    _____ Reinforced what we were already doing in our state in this effort
    _____ Changed my thinking regarding the role of agricultural education programs in area vocational schools
    _____ Conflicted with my ideas regarding agricultural education programs in area vocational schools
    _____ Other (explain)____
    ____
    ____

5. List any additional assistance or materials needed in furthering the development and/or implementation of programs in agriculture in area schools.____
    ____
    ____

NATIONAL SEMINAR ON AGRICULTURAL OCCUPATIONS PROGRAM DEVELOPMENT IN AREA VOCATIONAL SCHOOLS

Department of Agricultural Education
The Ohio State University
Columbus, Ohio 43210

FORM B

STATUS OF AGRICULTURAL OCCUPATIONS PROGRAM DEVELOPMENT IN AREA VOCATIONAL SCHOOLS OR CENTERS

Name____ State____________________

Position________________________________ Address____________________

This schedule is designed to ascertain the status of agricultural occupations program development in area vocational schools or centers in your state. Part I includes questions concerning the number and types of programs in operation or planned. Part II pertains to staffing practices for agricultural occupations programs in area schools or centers. Part III concerns facilities for agricultural occupations programs in area schools or centers.

Definition of area vocational education school or center: In responding to the following questions, consider area vocational schools or centers to be those schools or centers designated by the State Board for Vocational Education as area school facilities for which state vocational funds, federal funds, or both are used for construction and/or operation.

If there are no area vocational schools or centers currently in operation or planned in your state, enter your address and position above, check here ☐, and return the schedule.

Return to:

J. Robert Warmbrod or Darrell L. Parks
208 Agricultural Administration Building
The Ohio State University
2120 Fyffe Road
Columbus, Ohio 43210

PART I - PROGRAM DEVELOPMENT IN AREA SCHOOLS OR CENTERS

1. What types of area vocational-technical schools or centers are in operation or being developed in your state? (Check as many of the following categories as apply.)

Programs for high school students	Programs for full-time post-high school students	
______	______	a. Separate area vocational schools or centers; students maintain enrollment in and graduate from their home schools but are transported to the area school or center for vocational-technical and closely related subjects.
______	______	b. Separate area vocational schools or centers; students complete both vocational-technical and general education subjects at the area school or center and graduate from the area school or center.
______	______	c. Area vocational-technical programs are a part of comprehensive high schools or comprehensive community or junior colleges.
______	______	d. Other (please describe)______________________________ ______________________________________

2. How many area vocational-technical schools or centers are there in your state? (Indicate the number of schools or centers for each of the following.) This question pertains to all area schools in the state and is not limited to the area schools with agricultural occupations programs.

Programs for high school students	Programs for full-time post-high school students	
______	______	a. Number area schools or centers in operation during the 1968-69 school year.
______	______	b. Number area schools or centers approved (funding assured) and/or under construction.
______	______	c. Number (in addition to a and b above) planned for the state that are in various stages of development.
______	______	d. Total number of area schools or centers in operation and/or planned for the state. (Sum of a, b, and c.)

3. How many of the area schools or centers listed in question 2 include agricultural occupations programs? (Indicate the number of schools or centers for each of the following.)

Programs for high school students	Programs for full-time post-high school students	
______	______	a. Number of area schools or centers operating in 1968-69 with agricultural occupations programs.
______	______	b. Number of area schools or centers approved and/or under construction that will offer agricultural occupations programs.
______	______	c. Number of additional area schools or centers planned for the state in which agricultural occupations programs will be included.
______	______	d. Total number of area schools or centers in operation and/or planned in which agricultural occupations programs are or will be included. (Sum of a, b, and c.)

4. What types of agricultural occupations programs are in operation and/or planned for area schools or centers in your state? (Indicate the number of area schools or centers in which each of the following instructional programs are offered or planned.)

a. For area schools or centers OPERATING in 1968-69.

Indicate number of schools or centers offering programs:

For high school students	For full-time post-high school students	
______	______	(1) Agricultural production
______	______	(2) Agricultural mechanics
______	______	(3) Agricultural supplies
______	______	(4) Agricultural products
______	______	(5) Ornamental horticulture
______	______	(6) Agricultural resources
______	______	(7) Forestry

4. (continued)

b. For area schools or center APPROVED AND/OR UNDER CONSTRUCTION

Indicate number of schools or centers offering programs:

For high school students	For full-time post-high school students	
________	________	(1) Agricultural production
________	________	(2) Agricultural mechanics
________	________	(3) Agricultural supplies
________	________	(4) Agricultural products
________	________	(5) Ornamental horticulture
________	________	(6) Agricultural resources
________	________	(7) Forestry

c. For additional area schools or centers PLANNED THAT ARE IN VARIOUS STAGES OF DEVELOPMENT

Indicate number of schools or centers offering programs:

For high school students	For full-time post-high school students	
________	________	(1) Agricultural production
________	________	(2) Agricultural mechanics
________	________	(3) Agricultural supplies
________	________	(4) Agricultural products
________	________	(5) Ornamental horticulture
________	________	(6) Agricultural resources
________	________	(7) Forestry

PART II - STAFFING PATTERNS IN AREA SCHOOLS OR CENTERS

5. From what sources are teachers secured for agricultural occupations programs in area schools or centers? (Indicate the number of teachers currently employed in area schools or centers who were obtained from the categories listed.)

Area schools or centers for high school students	Area schools or centers for full-time post-high school students	
________	________	a. Number teachers who were regularly certified high school teachers of agriculture.
________	________	b. Number teachers who hold baccalaureate or higher degrees in agriculture (or related fields) but are not certified to teach agriculture in the high schools of the state.
________	________	c. Number teachers who are graduates of two-year post-high school technical programs in agriculture.
________	________	d. Number of teachers with little or no formal education beyond high school who were recruited directly from business or industry.
________	________	e. Other (Indicate number and describe source)______ ____ ____
________	________	f. Total number of teachers of agriculture currently employed in area schools or centers.

6. Please attach statements of certification standards for teachers in agricultural occupations programs in area schools that have been prepared and issued for your state. (Include certification standards for teachers in post-high school and high school programs.)

7. Are there teacher education programs in your state designed specifically for teachers of agriculture in area schools or centers? (Circle the appropriate response for each category below.)

For teachers in area schools or centers: For high school students	For teachers in area schools or centers: For full-time post-high school students	
Yes No	Yes No	a. Pre-service teacher education programs
Yes No	Yes No	b. In-service teacher education programs

If "yes" is circled above, please describe briefly the types of pre-service or in-service teacher education programs. ______________________________

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PART III - FACILITIES FOR AREA SCHOOLS OR CENTERS

8. Are facilities for area vocational schools or centers in your state designed to serve high school students only, post-high school students only, or both? (Indicate the number of schools or centers operating in 1968-69 with facilities in each of the following categories.) Note: This question pertains to all area schools or centers in the state and is not limited to the area schools or centers with agricultural occupations programs.

_______ a. Number schools or centers with facilities for high school students only.

_______ b. Number schools or centers with facilities for full-time post-high school students only.

_______ c. Number schools or centers with facilities for both high school and post-high school students.

9. Are facilities for agricultural occupations programs in area vocational schools or centers in your state designed to serve high school students only, post-high school students only, or both? (Indicate the number of schools or centers operating in 1968-69 with facilities for agricultural occupations programs in each of the following categories.)

________ a. Number schools or centers with facilities for high school students only.

________ b. Number schools or centers with facilities for full-time post-high school students only.

________ c. Number schools or centers with facilities for both high school and post-high school students.

10. Please attach any standards and/or specifications for facilities and equipment for agricultural occupations programs in area schools that have been prepared and issued for your state.